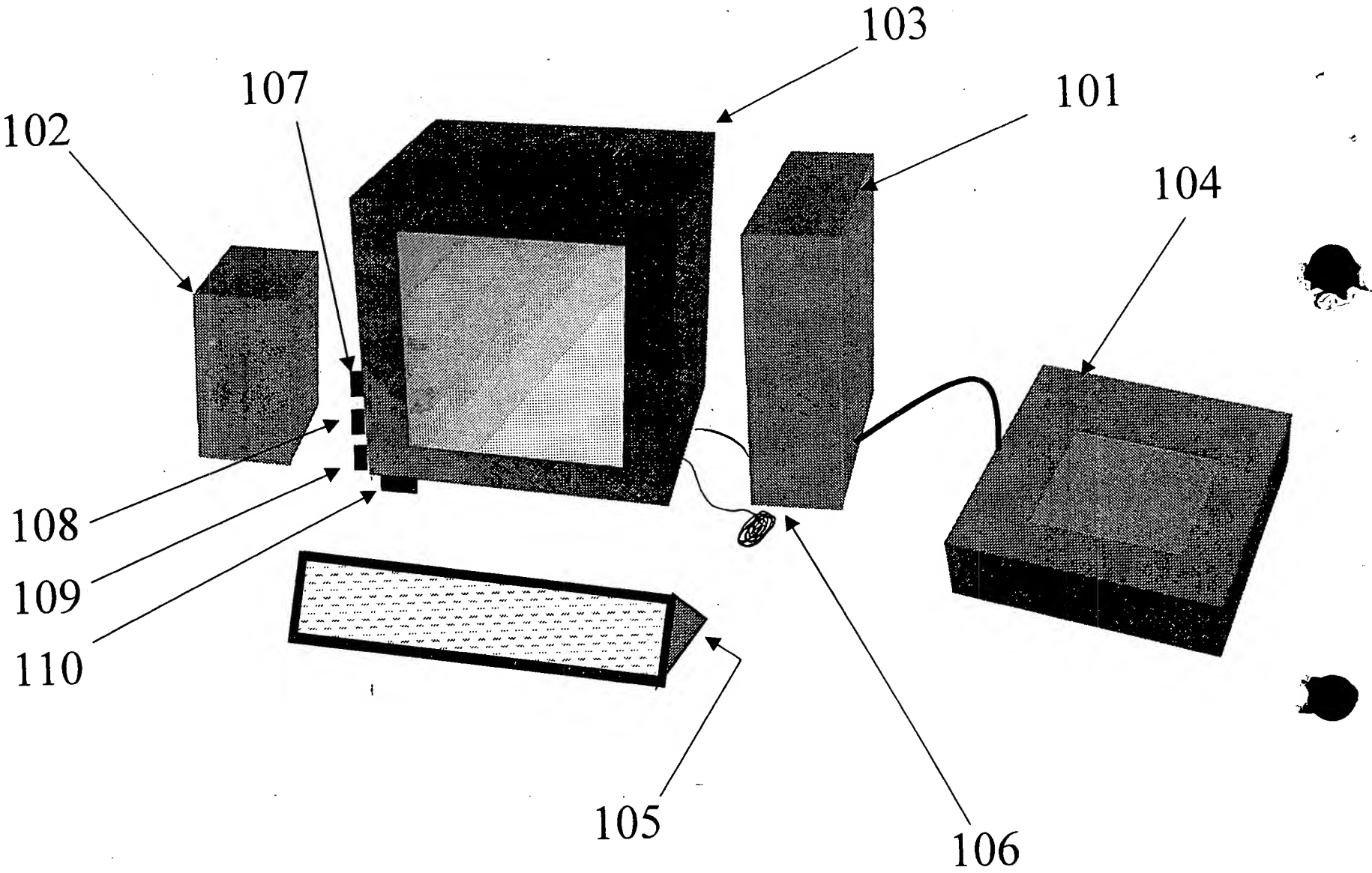


Fig. 1

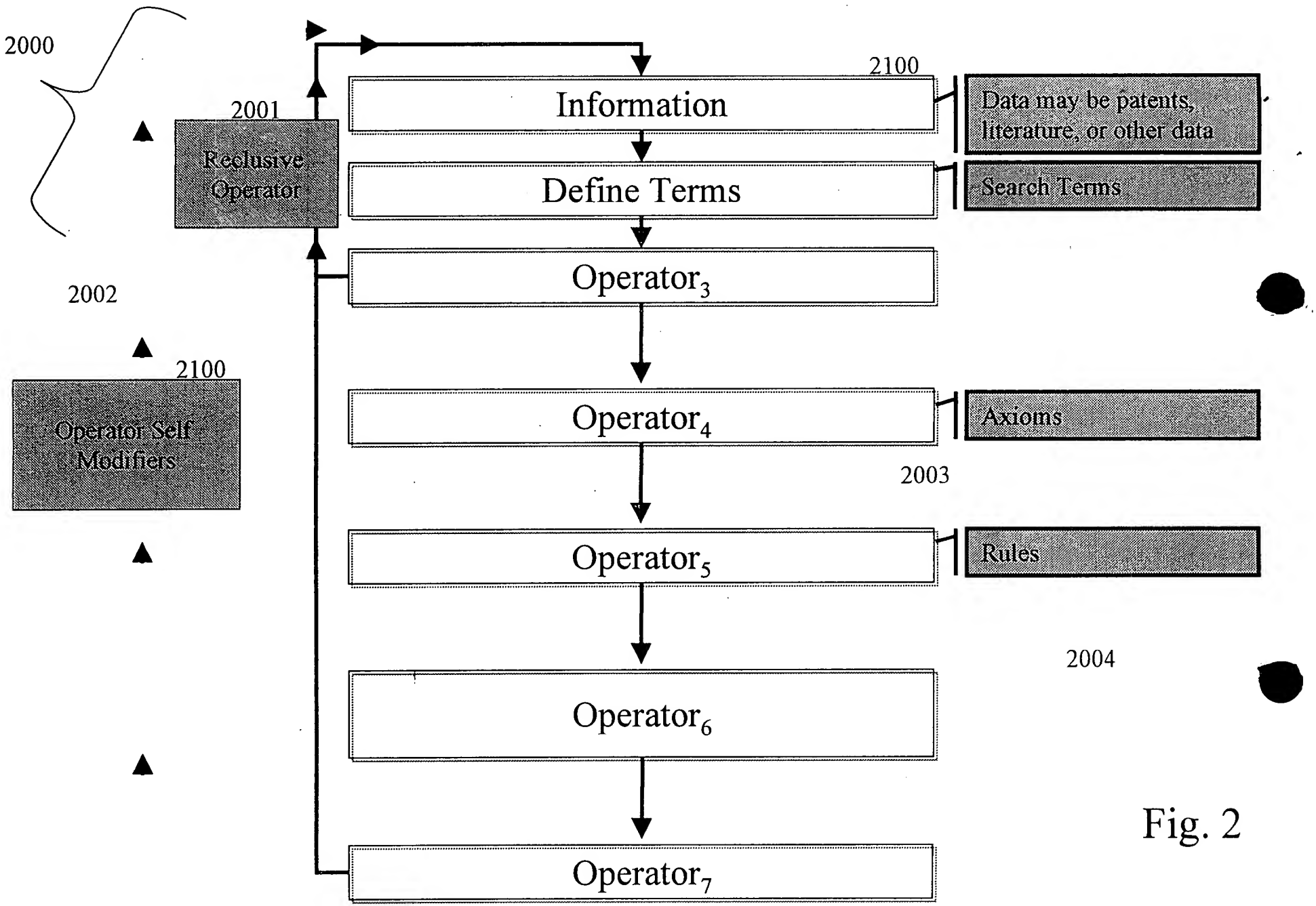

2000
2001
Reclusive Operator
2100
Information
Data may be patents, literature, or other data
Define Terms
Search Terms
Operator3
2002
2100
Operator Self Modifiers
Operator4
Axioms
2003
Operator5
Rules
2004
Operator6
Operator7

Fig. 2

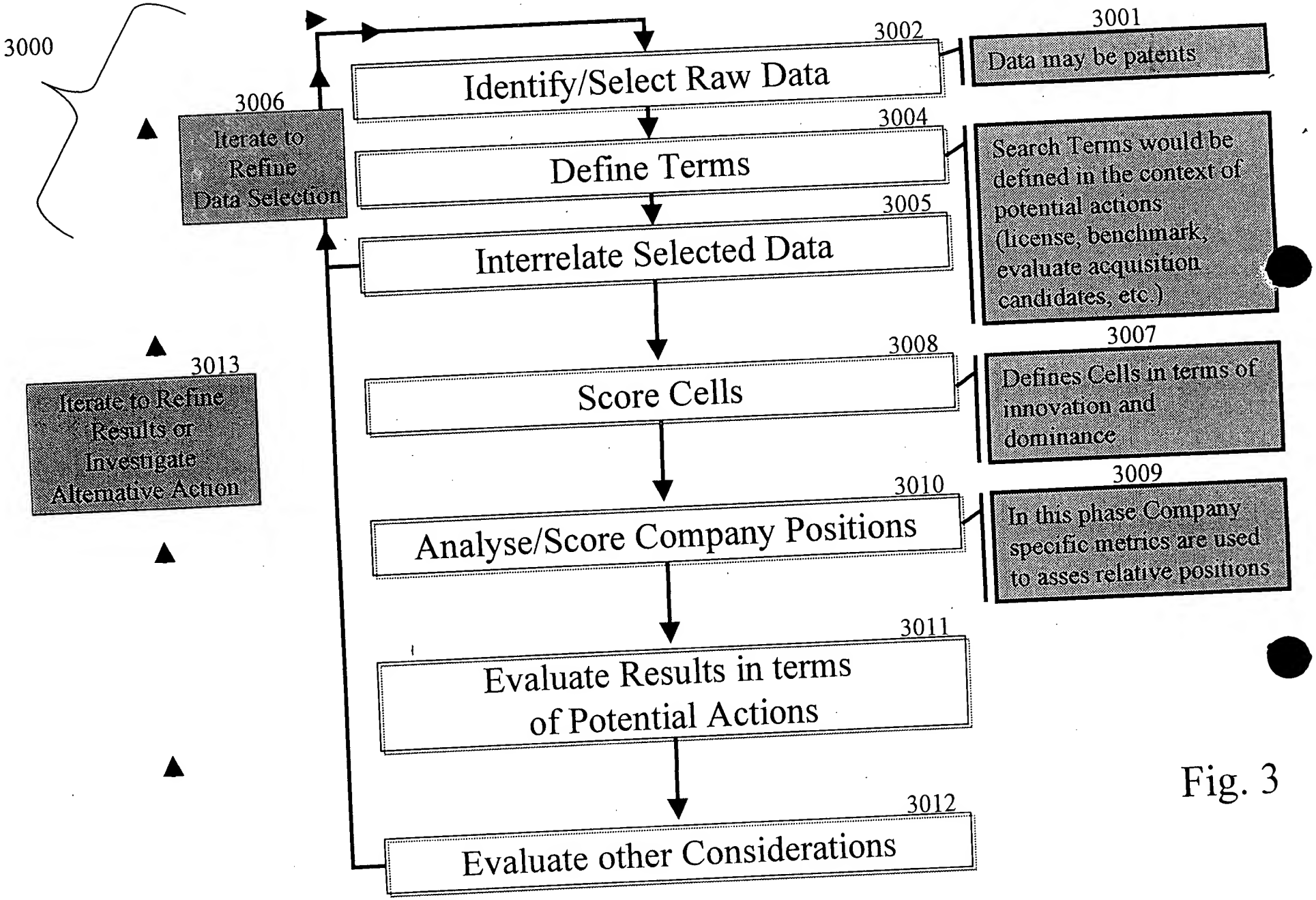

3000
3002
Identify/Select Raw Data
3001
Data may be patents
3006
Iterate to Refine Data Selection
3004
Define Terms
Search Terms would be defined in the context of potential actions (license, benchmark, evaluate acquisition candidates, etc.)
3005
Interrelate Selected Data
3013
Iterate to Refine Results or Investigate Alternative Action
3008
Score Cells
3007
Defines Cells in terms of innovation and dominance
3010
Analyse/Score Company Positions
3009
In this phase Company specific metrics are used to asses relative positions
3011
Evaluate Results in terms of Potential Actions
3012
Evaluate other Considerations

Fig. 3

An Example of Source Data

Infrared Technology

Objects 4001

Actions 4014		4005 01 photoreceptor or photo-receptor	02	03	4011 04 remote network or wireless network	05	06
		4006 2969	4059 digital image 5004	4060 digital scan 775	4061 1224	4062 thermal image 1672	4063 optic align 5278
A near infrared	4008 1681	4003 12 4004	9	1	1	18	22
B far infrared	4064 550	4072 0	0	0	0	3	12
C infrared	4065 21604	62	4072 87 4071	20	34	263	249

4002 4007 4081 4013 4015 4082

Fig. 4

Initial Definitions

SEARCH TERM - a string of text to be found within the Text or Claims of desired patents.
Search Terms can be classified as either "Action" or "Object."
Several related Action Search Terms may be combined to reflect a single Action.

CELL - a cross section of Search Terms (Action x Object).
Cells are given a reference code (e.g. A01) to depict the combination of source Search Terms.
The reference code may be followed by a C or T to note that the search terms were found within the Text or Claims of the included patents.

CLUSTER - a group of naturally related cells.

FIELD - a patent landscape defined by the composite of all cells.

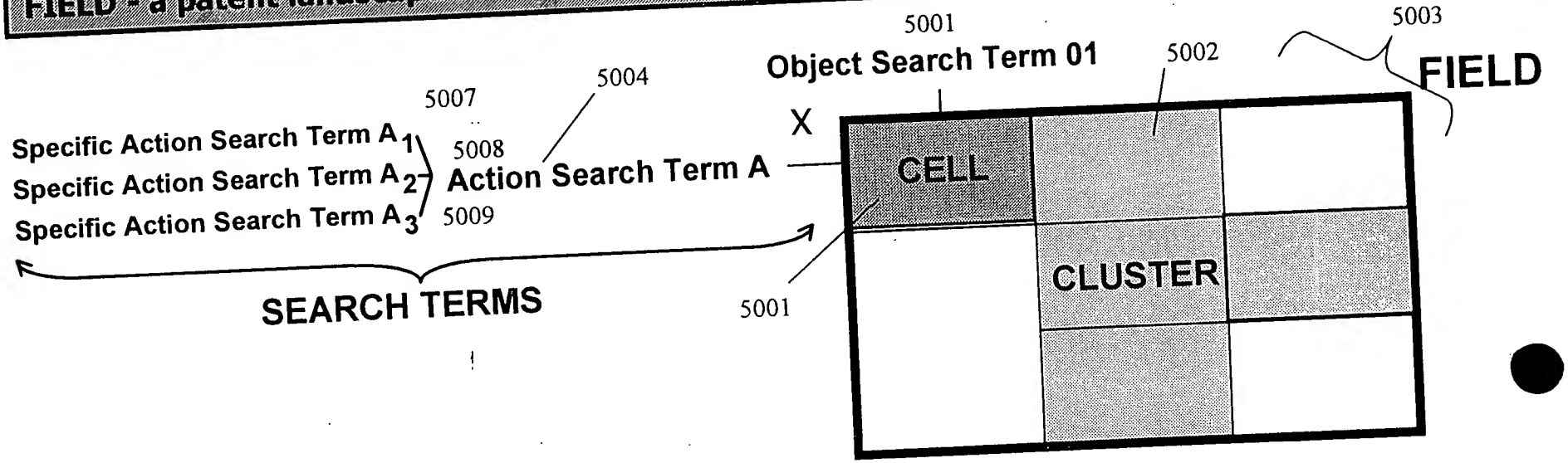


Fig. 5

The Power to be Both Focused and Inclusive

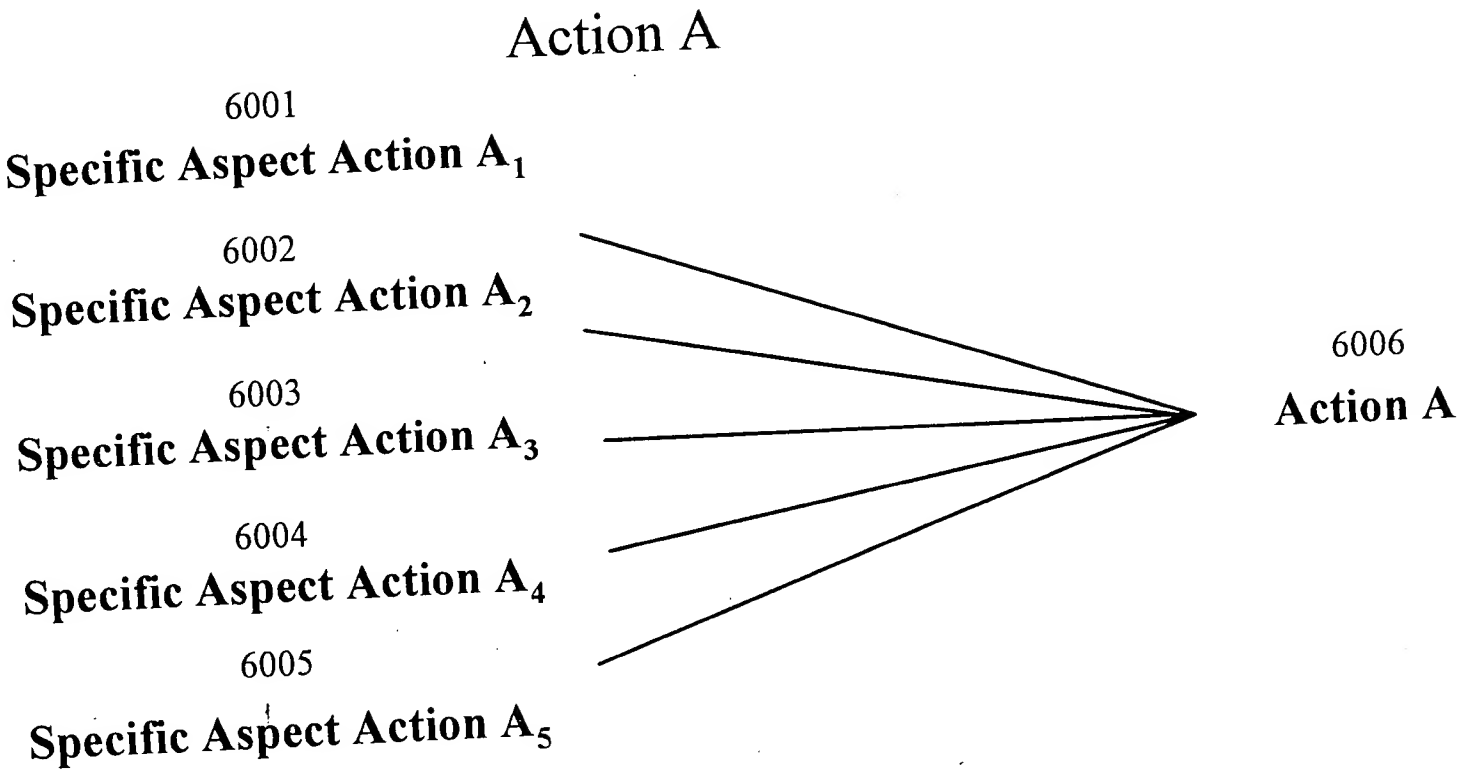


Fig. 6

* Patents identified in any of these specific terms are rolled into one Action Data set.

Patent Crosstab Report

7001 Assignee	7002 Document ID	7003 Title	7004 Issued	7005 Document Type	7006 Hits	7007 Weighted Hits	7008 Weighted Action	7009 C01	7010 C02	C03	C04	C05	C06
Object Weights								1	1	2	1	1	3
He Holdings	6025595	Sprite thermal imaging system with electronic zoom	2/15/00	US	3	4	2		1	1		1	
Raytheon	WO 98/35496	SPRITE THERMAL IMAGING SYSTEM WITH ELECTRONIC ZOOM	8/13/98	PCT	3	4	3		1	1		1	
Raytheon	WO 98/35497	SPRITE THERMAL IMAGING SYSTEM	8/13/98	PCT	3	4	4		1	1		1	
He Holdings	5739531	Sprite thermal imaging system	4/14/98	US	3	4	3		1			1	1
United States Of America	4470816	Thermal sight trainer	9/11/84	US	3	5	3						
Liu, Zhong Qi	6023637	Method and apparatus for thermal radiation imaging	2/8/00	US	2	4	3		1	1			
Empresa Nacional Bazan de Construcciones Naval Militares	EP 0 611 242 B1	A SYSTEM FOR THE MONITORING AND DETECTION OF HEAT SOURCES IN OPEN AREAS	10/20/99	EP-B	2	4	2		1				1
Omnicorder Technologies	5961466	Method of detection of cancerous lesions by their effect on the spatial distribution of modulation of temperature and homogeneity of tissue	10/5/99	US	2	1	2		1			1	
Massachusettes Institute Of Technology	5909244	Real time adaptive digital image processing for dynamic range remapping of imagery including low-light-level visible imagery	6/1/99	US	2	1	1		1			1	
Vachtsevanos, George J.	5815198	Method and apparatus for analyzing an image to detect and identify defects	9/29/98	US	2	4	1		1	1			
United States Of America	5756990	Simplified simulation of effects of turbulence on digital imagery	5/26/98	US	2	1	4		1			1	
Hughes Electronics	5737119	Thermal imaging device	4/7/98	US	2	4	2					1	1
Hughes Electronics	5673143	Thermal imaging device with selectively replaceable telescopic lenses and automatic lens identification	9/30/97	US	2	4	2					1	
Eastman Kodak	5668596	Digital imaging device optimized for color performance	9/16/97	US	2	3	2		1	1			
He Holdings Dba Hughes Electronics	EP 0 762 173 A2	THERMAL IMAGING DEVICE	3/12/97	EP-A	2	4	1					1	1

7011

Fig. 7

Assignee Rollup

8021

8001

Rank	Assignee	Hits	8022 Patents	8023 Recent Hits	8024 Recent Patents	8025 Weighted Hits	8026 Weighted Action	C 01	R C01	C02	R C02	C03	R C03	C04	R C04	C05	R C05	C06	R C06
	8002 Patents							62		87		20		34		263		249	
	8003 Issued Patents							49		65		17		23		206		222	
	8004 Applied Patents							13		22		3		11		57		27	
	8005 Recent Patents							16		33		10		11		55		40	
	8006 Issued Recent Patents							14		22		7		7		44		34	
	8007 Applied Recent Patents							2		11		3		4		11		6	
	8008 Dominance							0.48		0.26		0.20		0.44		0.48		0.40	
	8009 Recent Dominance							0.44		0.18		0.20		0.18		0.27		0.28	
	8010 Issued Innovation Factor 4							0.33		0.62		0.69		1.29		0.10		0.17	
	8011 Applied Innovation Factor 4							0.64		0.87		0.33		0.50		-0.02		0.19	
	8012 Predictive Innovation Factor 4							0.31		0.25		-0.36		-0.79		-0.12		0.02	
1	Eastman Kodak	43	42	4	4			3		3		1				30	3	6	1
2	United States Of America	34	31	3	2					2	1					11	2	21	
3	Texas Instruments	20	20	3	3					2				3		13	3	2	
4	Xerox	18	18	4	4			17	3			1	1						
5	Minnesota Mining & Manufacturing	17	17	2	2			2		1	1					14	1		
6	Intl Business Machines	16	16	2	2					1				12	2			3	
7	Hughes Electronics	16	13	3	2					1						10	2	5	1
8	Raytheon	15	11	12	8					5	2	2	2			6	6	2	2
9	Hughes Aircraft	14	13	1	1											3		11	1
10	Westinghouse Electric	12	12													2		10	
11	Thermoscan	12	12	5	5													12	5
12	Konica	12	12	5	5			9	4							3	1		
13	Polaroid	12	12	1	1					2	1					8		2	
14	Barr & Stroud	10	10													1		9	
15	Matsushita Industrial Electric	10	10	3	3									1		9	3		

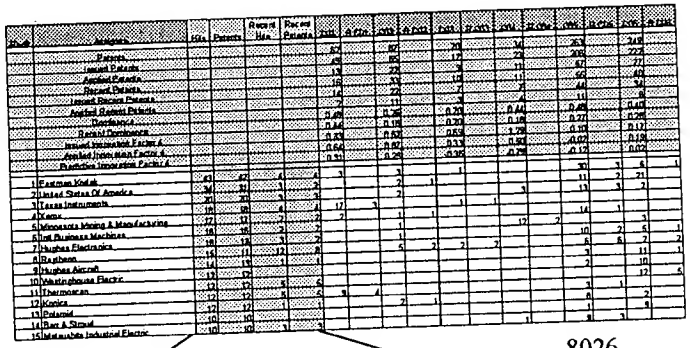
8020

Fig. 8A

Fig. 8B

Assignee Indices

Assignee Rollup

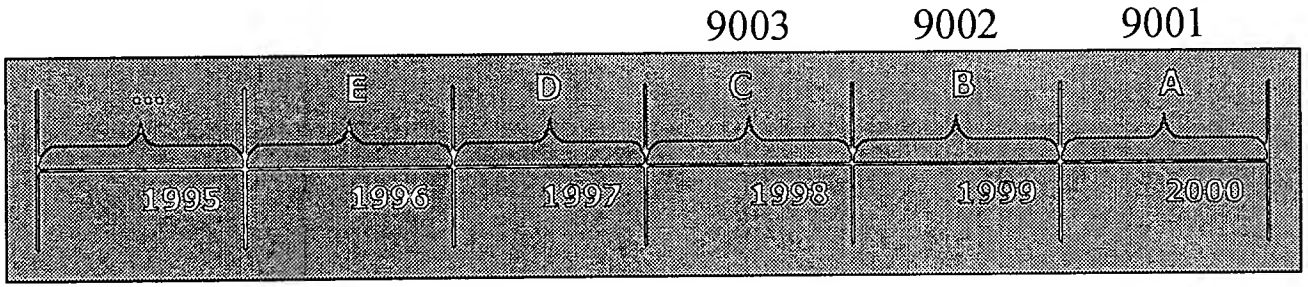


8021 8022 8023 8024 8025 8026

Hits	Patents	Recent Hits	Recent Patents	Weighted Hits	Weighted Actions
43	42	4	4	48	5
34	31	3	2	39	7
20	20	3	3	26	4
18	18	4	4	22	9
17	17	2	2	21	11
16	16	2	2	22	4
16	13	3	2	14	12
15	11	12	8	18	5
14	13	1	1	16	9
12	12			14	15
12	12	5	5	15	2
12	12	5	5	12	8
12	12	1	1	15	1
10	10			11	3
10	10	3	3	14	5

Cell Indices - Definitions

Innovation Factor 1 (Applied or Issued)



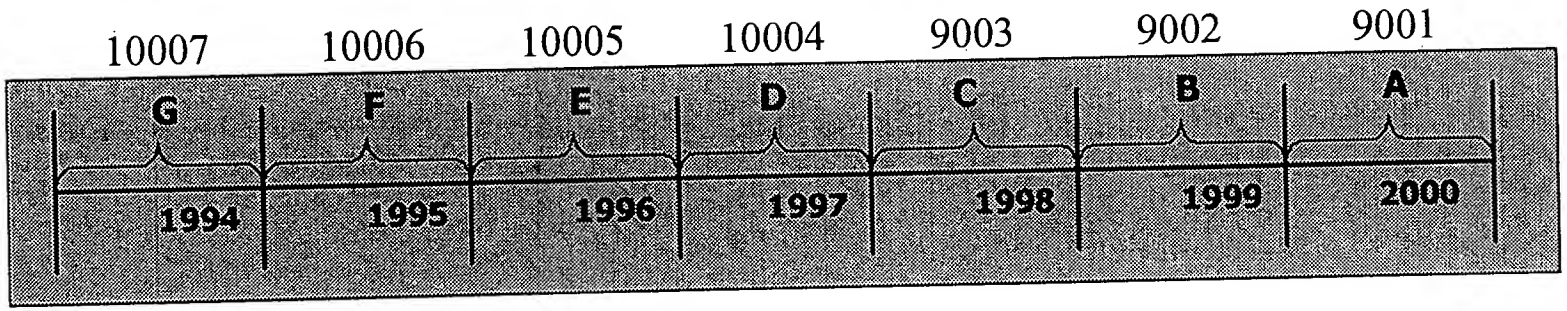
$$\text{9000 Innovation Factor} = \frac{A^{9001}}{(B+C)/2}$$

9002 9003

Fig. 9

Cell Indices - Definitions

Innovation Factor 4 (Applied or Issued)



Innovation Factor 4 =

$$\frac{\left(\frac{(A-B)}{B} \times 6\right) + \left(\frac{(B-C)}{C} \times 5\right) + \left(\frac{(C-D)}{D} \times 4\right) + \left(\frac{(D-E)}{E} \times 3\right) + \left(\frac{(E-F)}{F} \times 2\right) + \left(\frac{(F-G)}{G} \times 1\right)}{21}$$

10012 10011 10013 10014 10015 10016 10017 10017

Fig. 10

Cell Selection Matrix

Cell Selection Index is calculated for each cell based on the implied suitability for joint ventures or internal development:

			01 photoreceptor or photo-receptor	02 digital image	03 digital scan	04 remote network or wireless network	05 thermal image	06 optic align
11001	A	License	4	4	1.25	1.25	6	0
	B	License					0	14
	C	License	20	15	5	10.5	1.75	3.5
11002	A	Develop	6	16	1.25	1.25	14	0
	B	Develop					0	6
	C	Develop	5	15	7.5	7	0.75	1.5

Fig. 11

Cell Selection Index

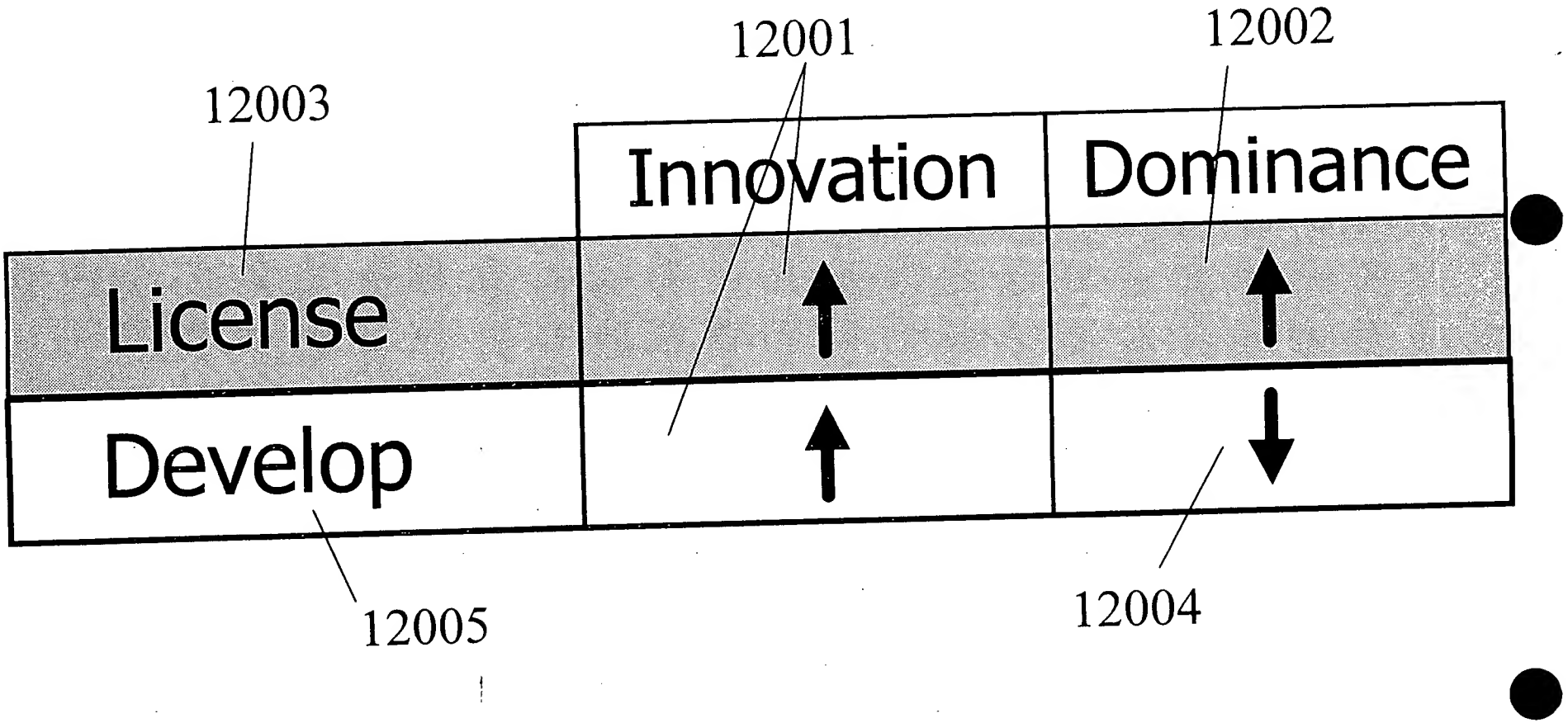


Fig. 12

Cell Selection Matrix

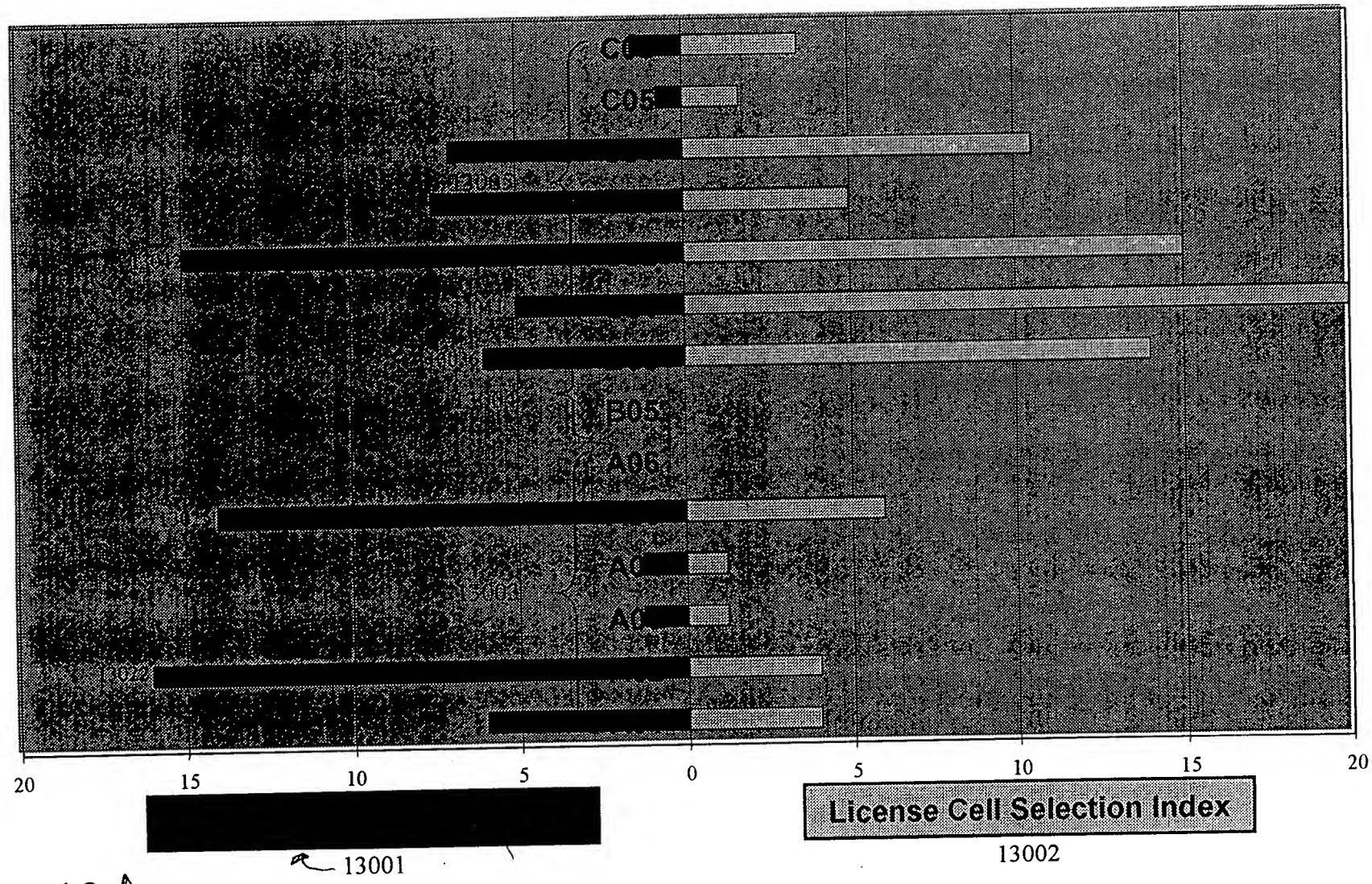
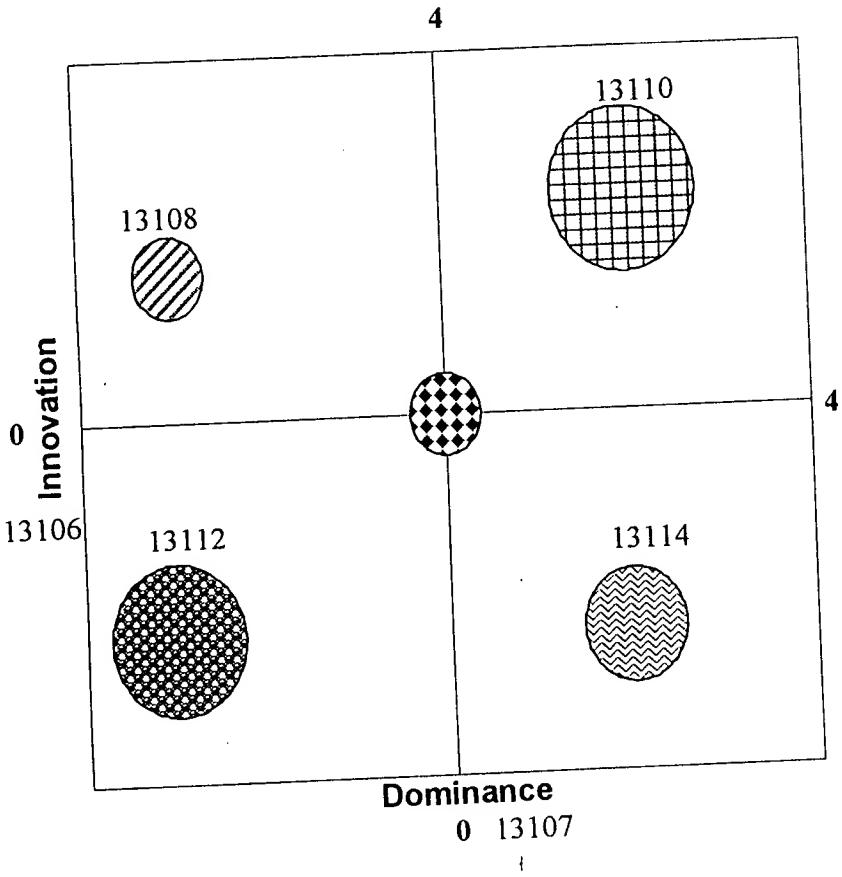
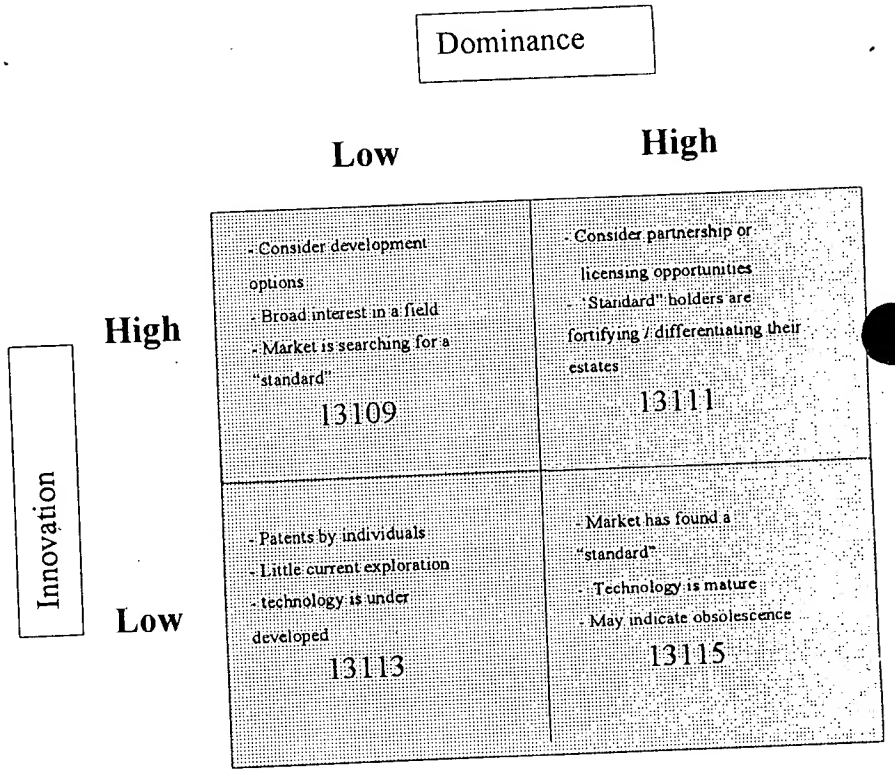


Fig. 13

Cell Selection Score - Bubble Chart





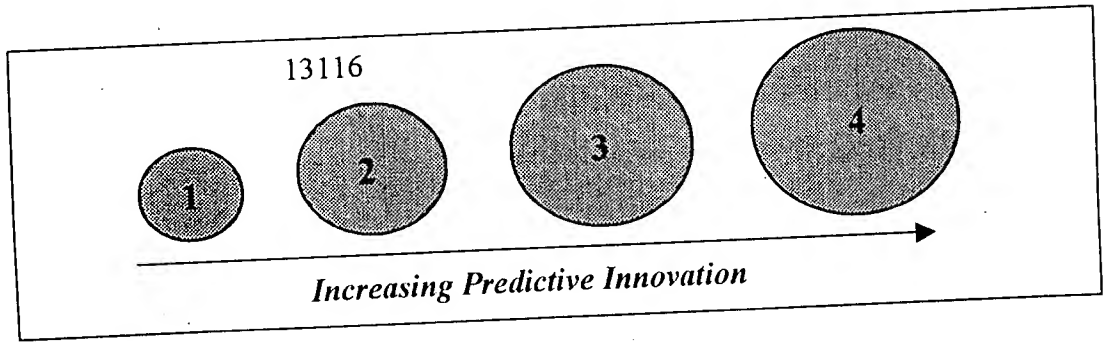


Fig. 13A

PATENT APPLICATION

Assignee Composite Score

Rank (14002)	Assignee (14001)	photoreceptor or photo-receptor (14003)	digital image (14004)	digital scan (14005)	remote network or wireless network (14006)	thermal image (14007)	optic align (14008)
		C01	C02	C03	C04	C05	C06
1	A	61.4	46.1	5.1	0.0	59.0	25.0
2	B	0.0	55.4	0.0	0.0	26.4	80.6
3	C	0.0	30.0	0.0	31.5	28.0	7.0
4	D	400.0	0.0	10.0	0.0	0.0	0.0
5	E	40.0	30.0	0.0	0.0	26.3	0.0
6	F	0.0	15.0	0.0	147.0	0.0	10.5
7	G	0.0	18.5	0.0	0.0	26.8	26.8
8	H	0.0	147.3	28.6	0.0	30.1	20.0
9	I	0.0	0.0	0.0	0.0	5.7	45.0
10	J	0.0	0.0	0.0	0.0	3.5	35.0
11	K	0.0	0.0	0.0	0.0	0.0	59.5
12	L	260.0	0.0	0.0	0.0	7.0	0.0
13	M	0.0	45.0	0.0	0.0	14.0	7.0
14	N	0.0	0.0	0.0	0.0	1.8	31.5
15	O	0.0	0.0	0.0	10.5	21.0	0.0

14010

Fig. 14

Assignee Composite Score

Normalized

Rank (14002)	Assignee (14001)	photoreceptor or photo-receptor (14003) C01	digital image (14004) C02	digital scan (14005) C03	remote network or wireless network (14006) C04	thermal image (14007) C05	optic align (14008) C06
1	A	15.4	25.6	8.5	0.0	100.0	31.0
2	B	0.0	30.8	0.0	0.0	44.7	100.0
3	C	0.0	16.7	0.0	21.4	47.5	8.7
4	D	100.0	0.0	16.7	0.0	0.0	0.0
5	E	10.0	16.7	0.0	0.0	44.5	0.0
6	F	0.0	8.3	0.0	100.0	0.0	13.0
7	G	0.0	10.3	0.0	0.0	45.4	33.2
8	H	0.0	81.8	47.7	0.0	51.0	24.9
9	I	0.0	0.0	0.0	0.0	9.6	55.8
10	J	0.0	0.0	0.0	0.0	5.9	43.4
11	K	0.0	0.0	0.0	0.0	0.0	73.8
12	L	65.0	0.0	0.0	0.0	11.9	0.0
13	M	0.0	25.0	0.0	0.0	23.7	8.7
14	N	0.0	0.0	0.0	0.0	3.0	39.1
15	O	0.0	0.0	0.0	7.1	35.6	0.0

15010

Fig. 15A

PCT/US99/26268

Assignee Composite Score

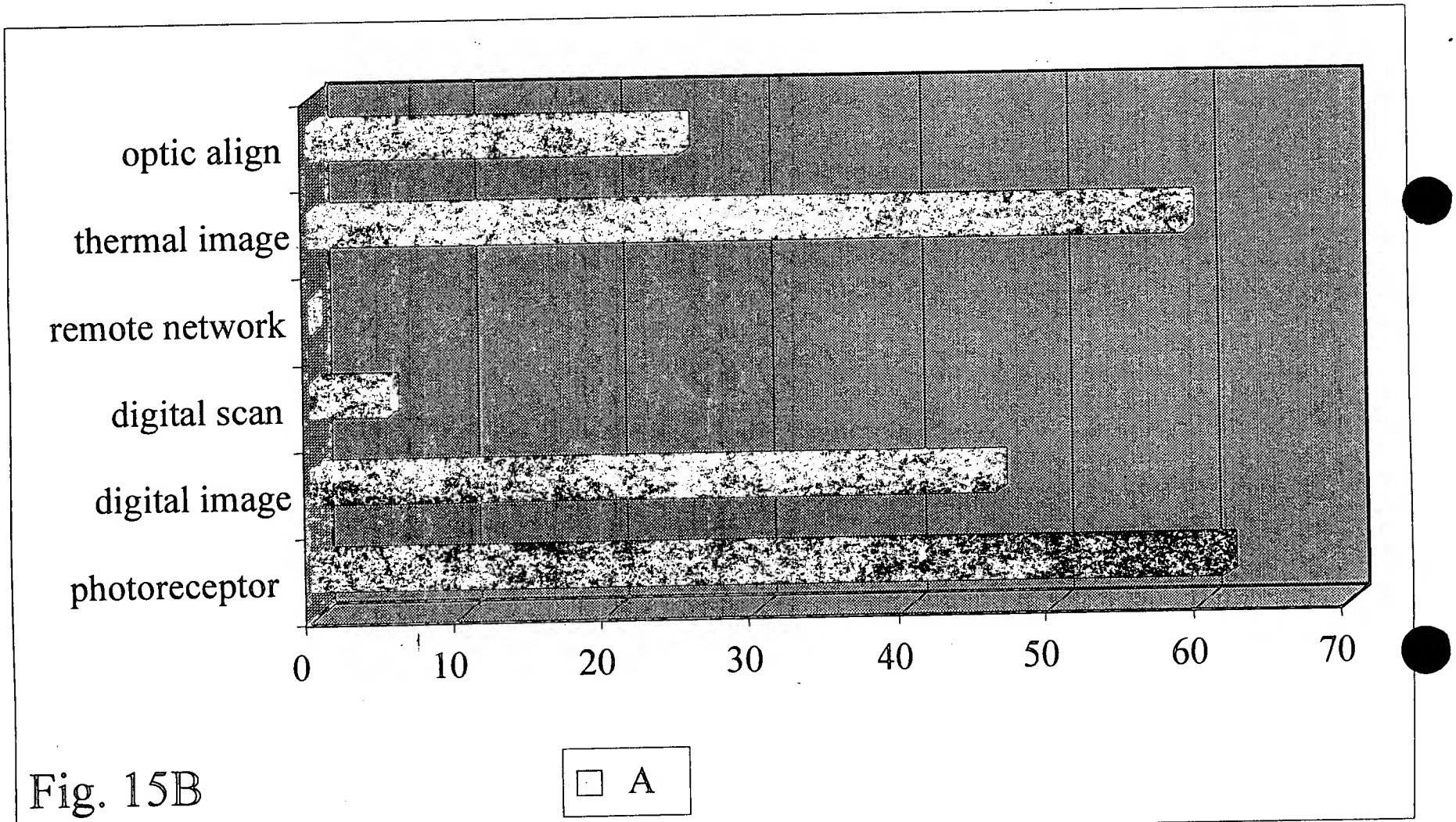


Fig. 15B

Assignee Composite Score

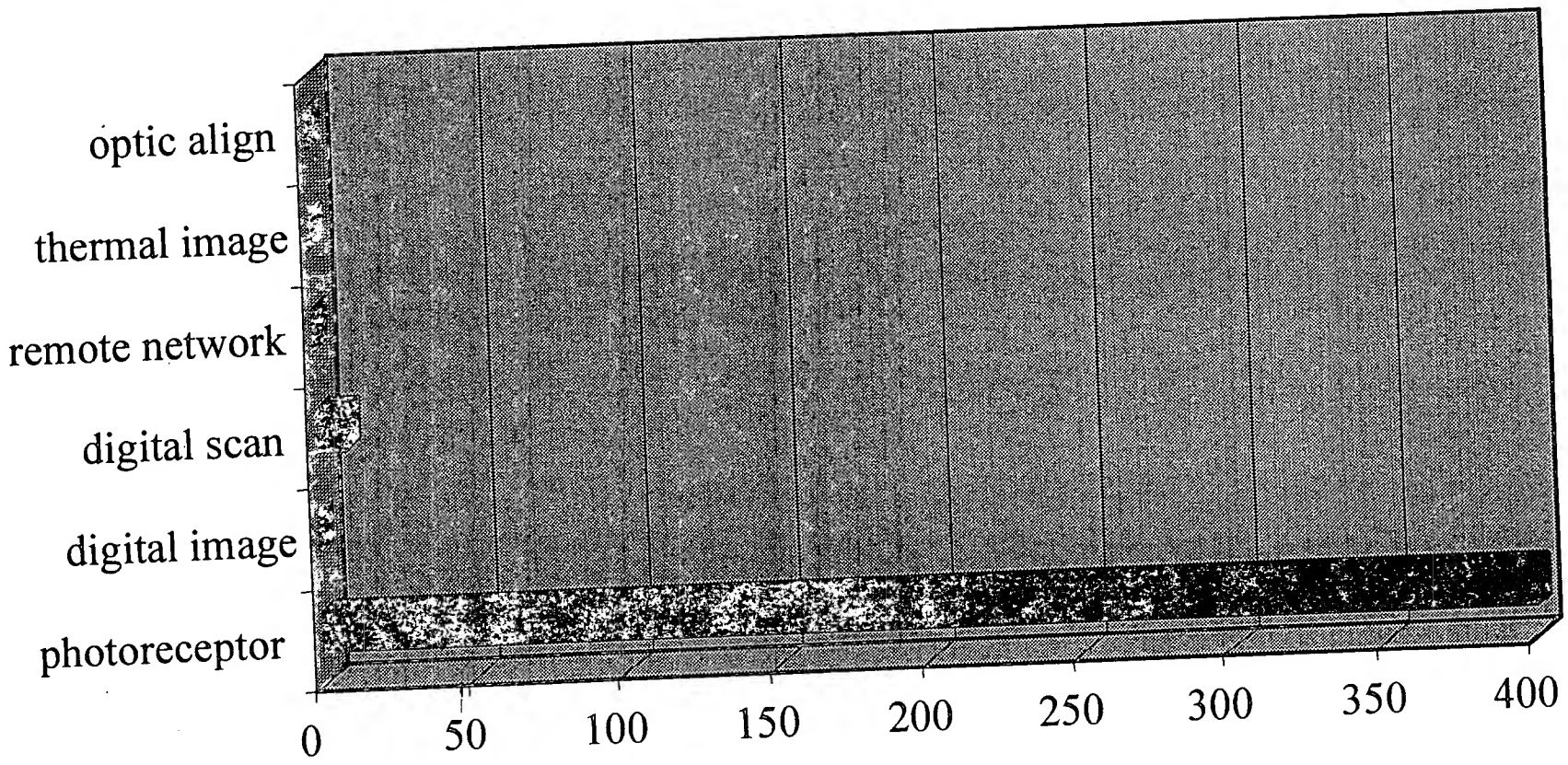


Fig. 15C

PATENT 6618260

Assignee Composite Score

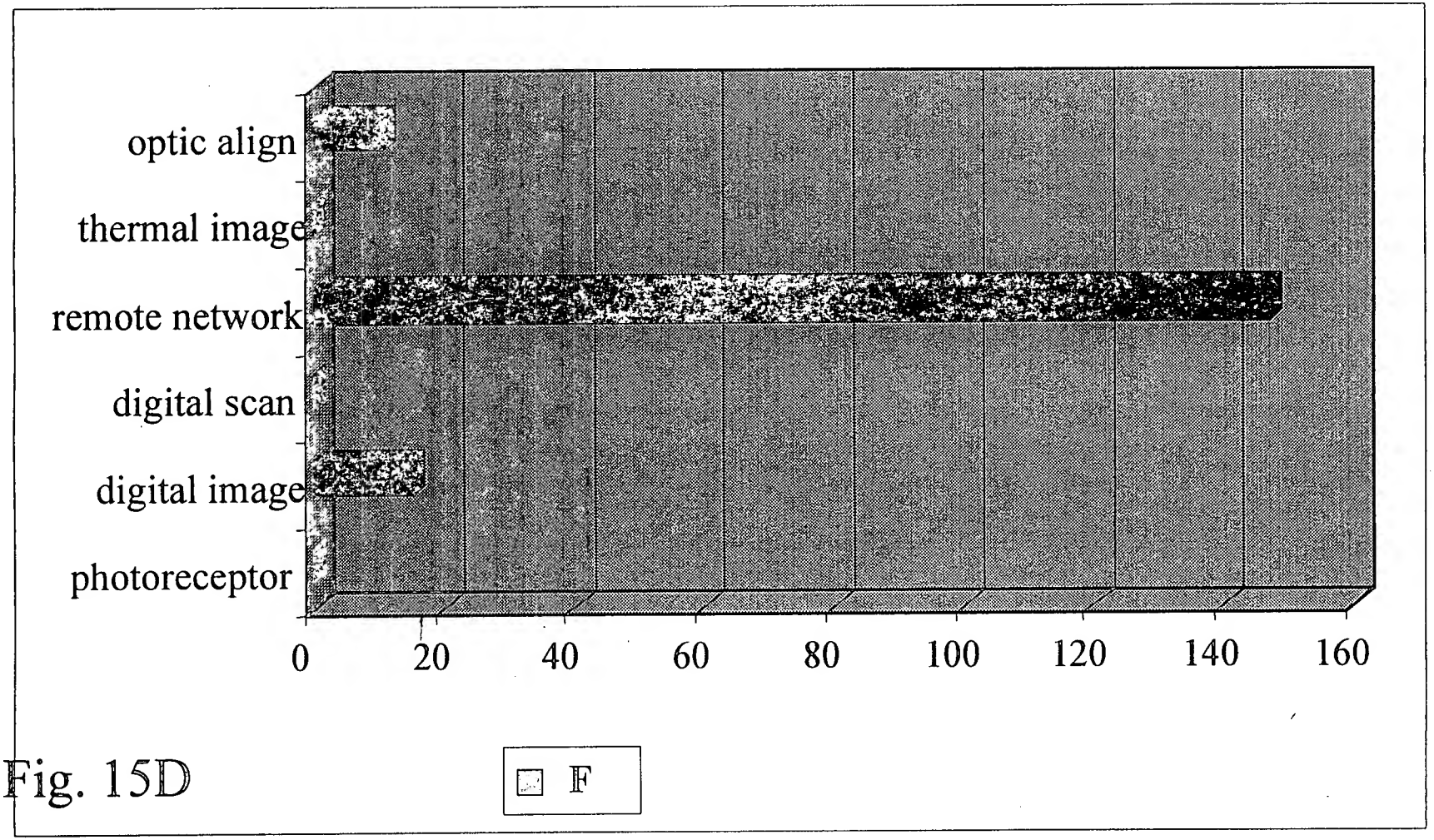


Fig. 15D

Assignee Composite Score

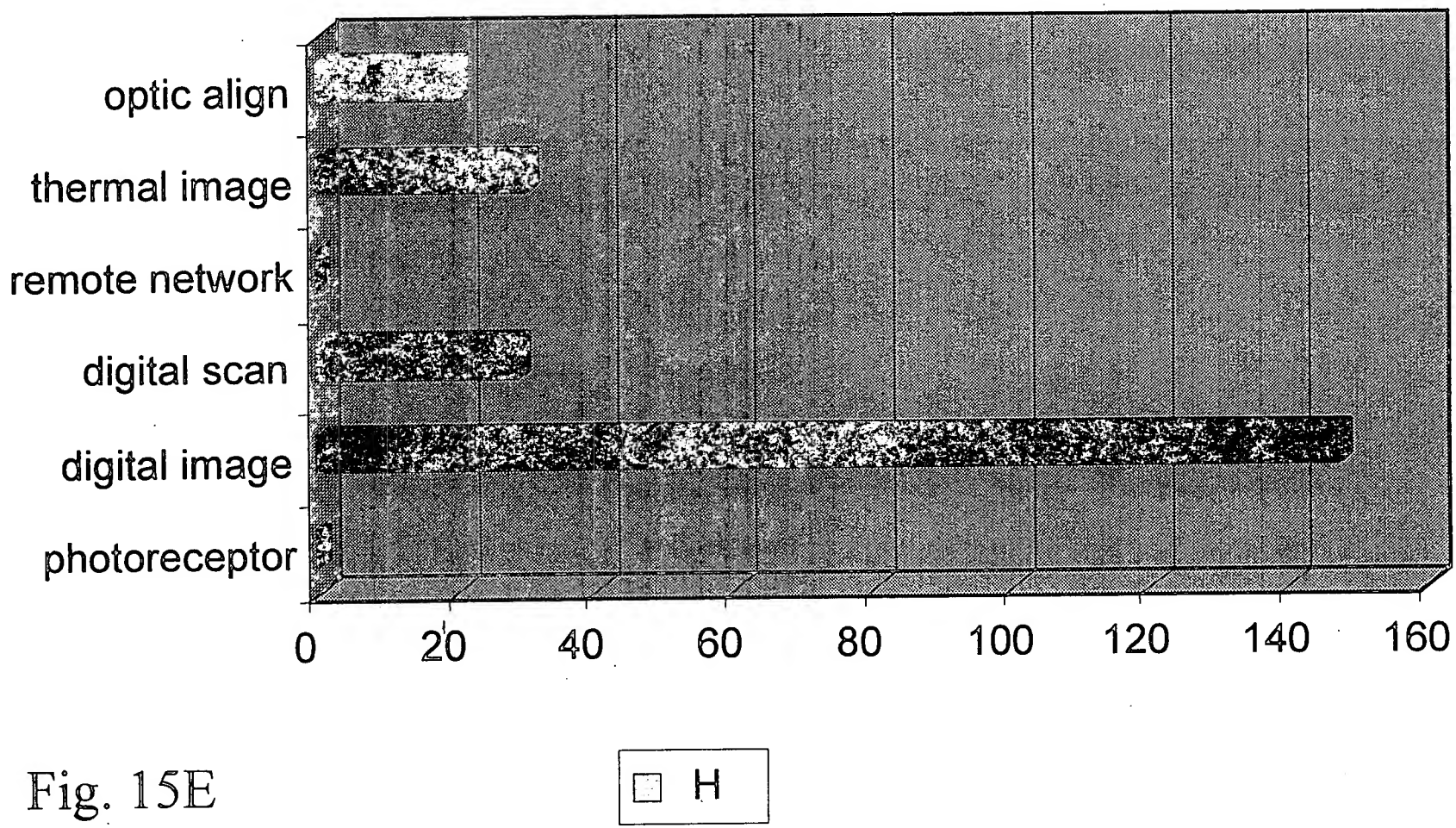


Fig. 15E

Graphical Representation of Assignee Composite Score

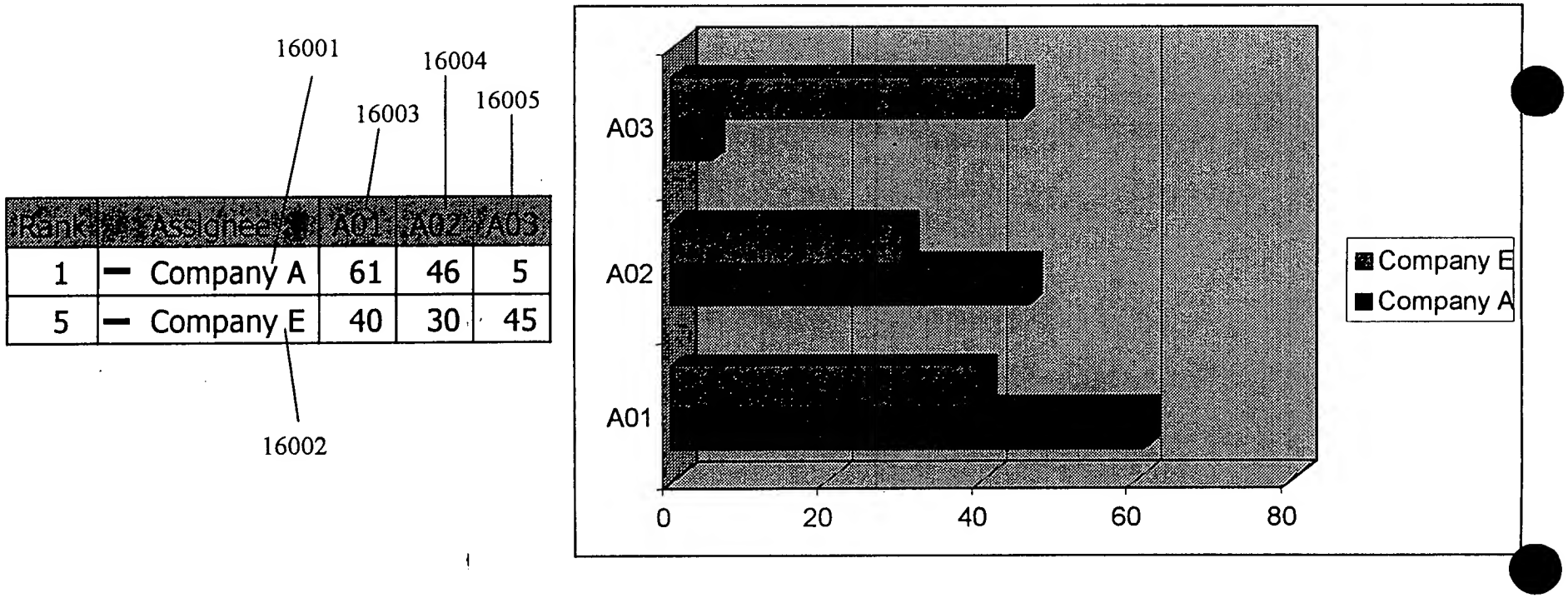


Fig. 16

Assignee Composite Score

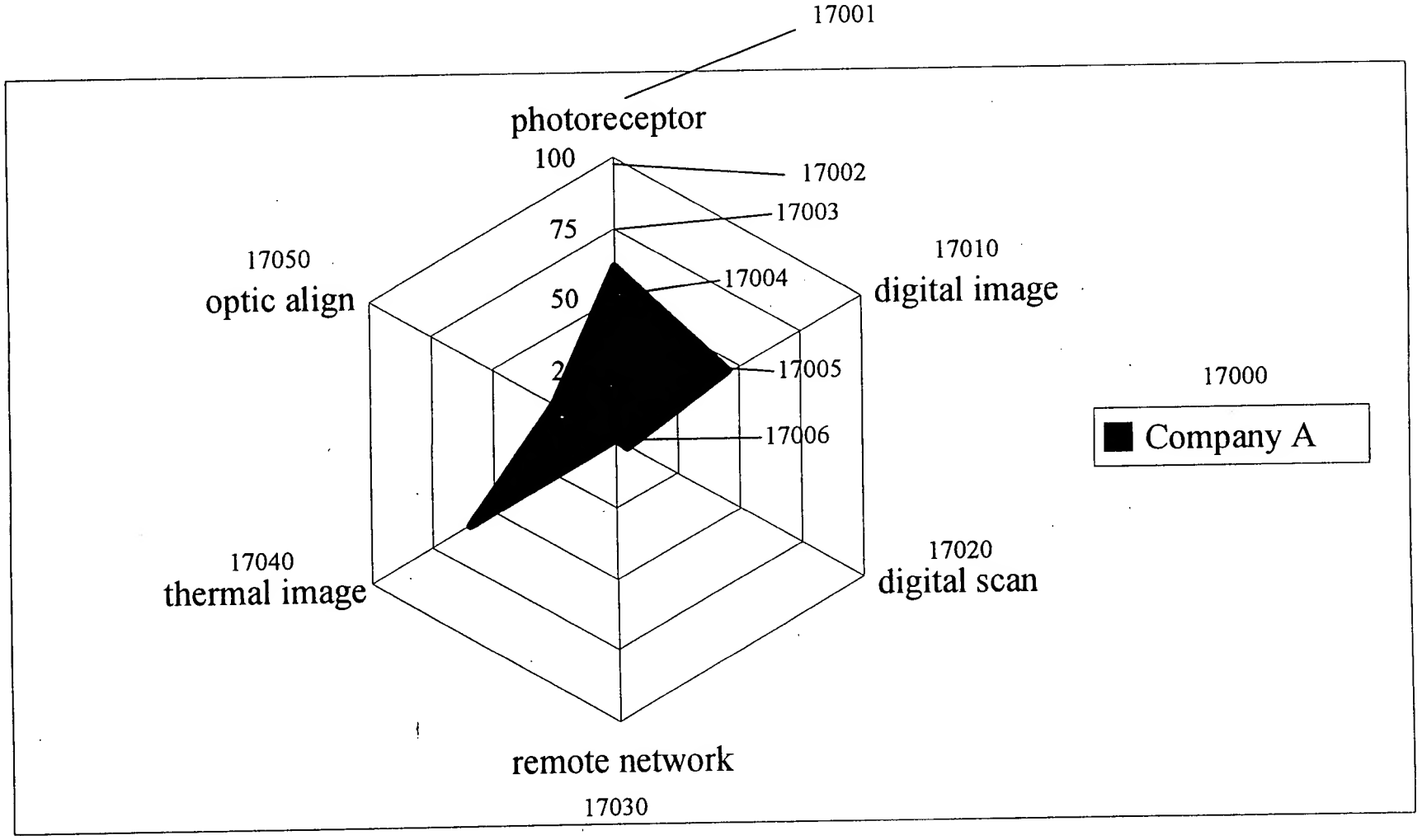


Fig. 17

Assignee Composite Score

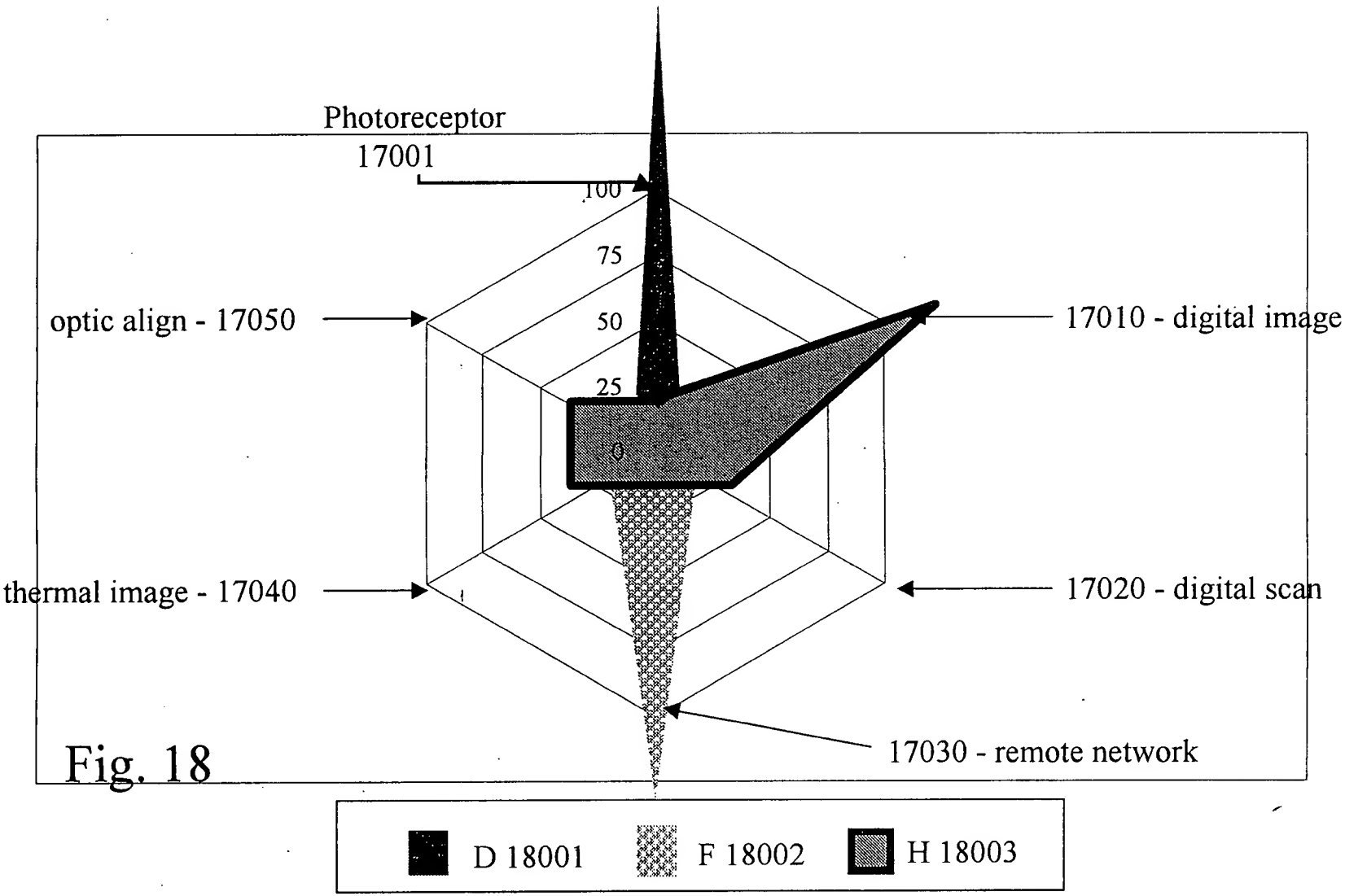


Fig. 18

Assignee Composite Score

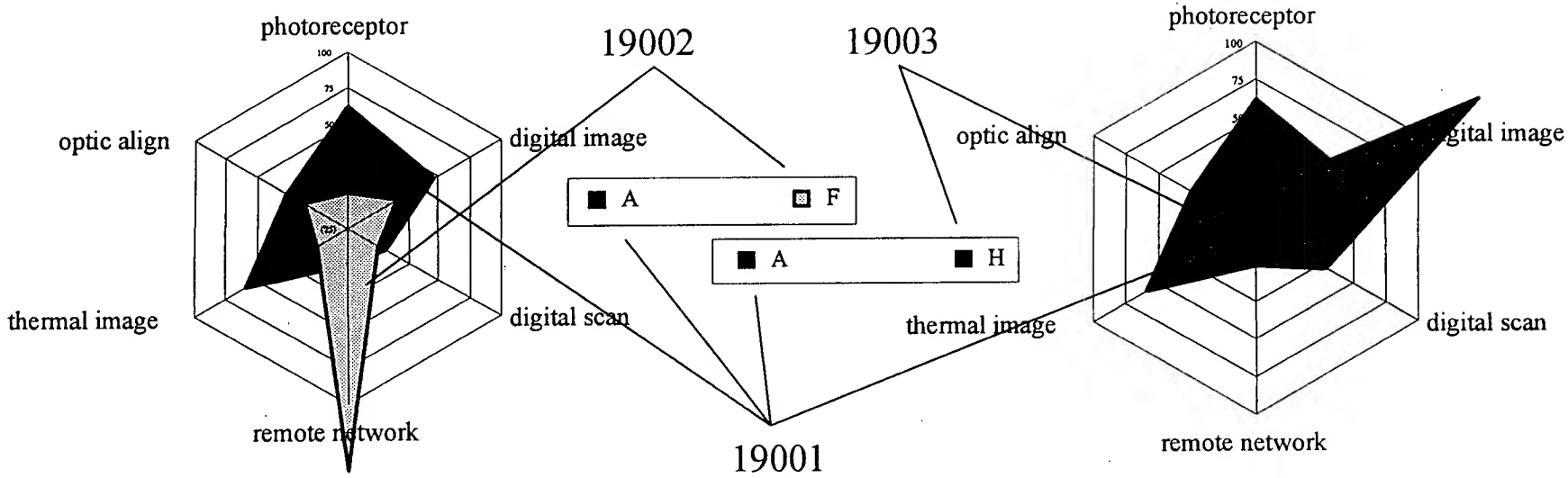


Fig. 19

20100

Target Partner 1

Assignee Specific Cell Selection Indices

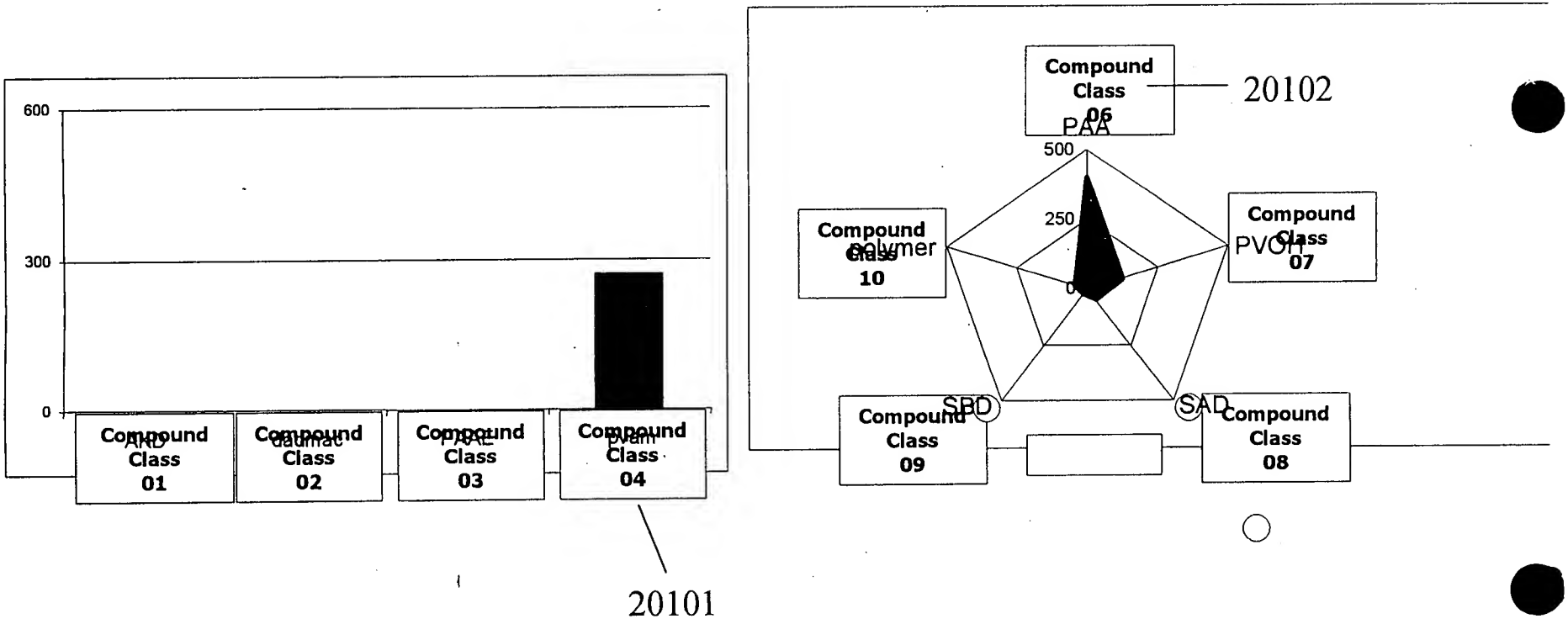


Fig. 20A

20200

Alternative Partner 2

Assignee Specific Cell Selection Indices

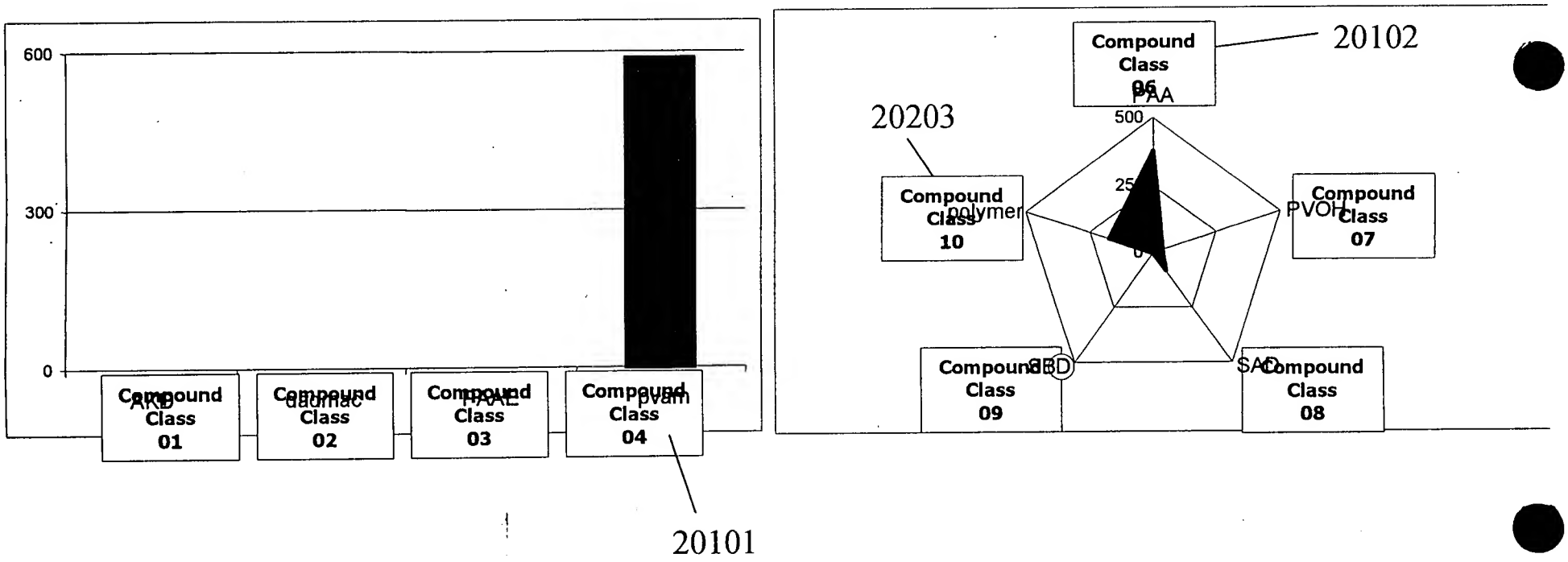


Fig. 20B

20300

Alternative Partner 3

Assignee Specific Cell Selection Indices

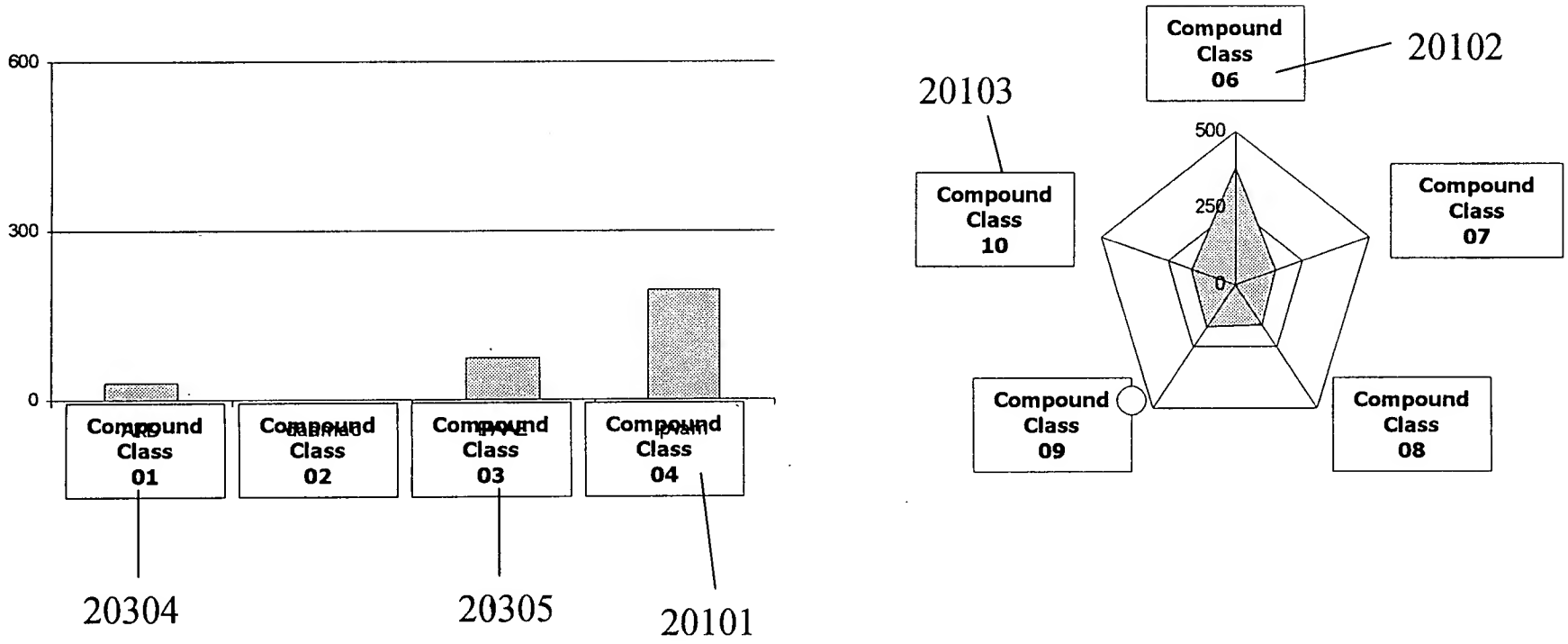


Fig. 20C

Assignee Field Index vs. Patent Count

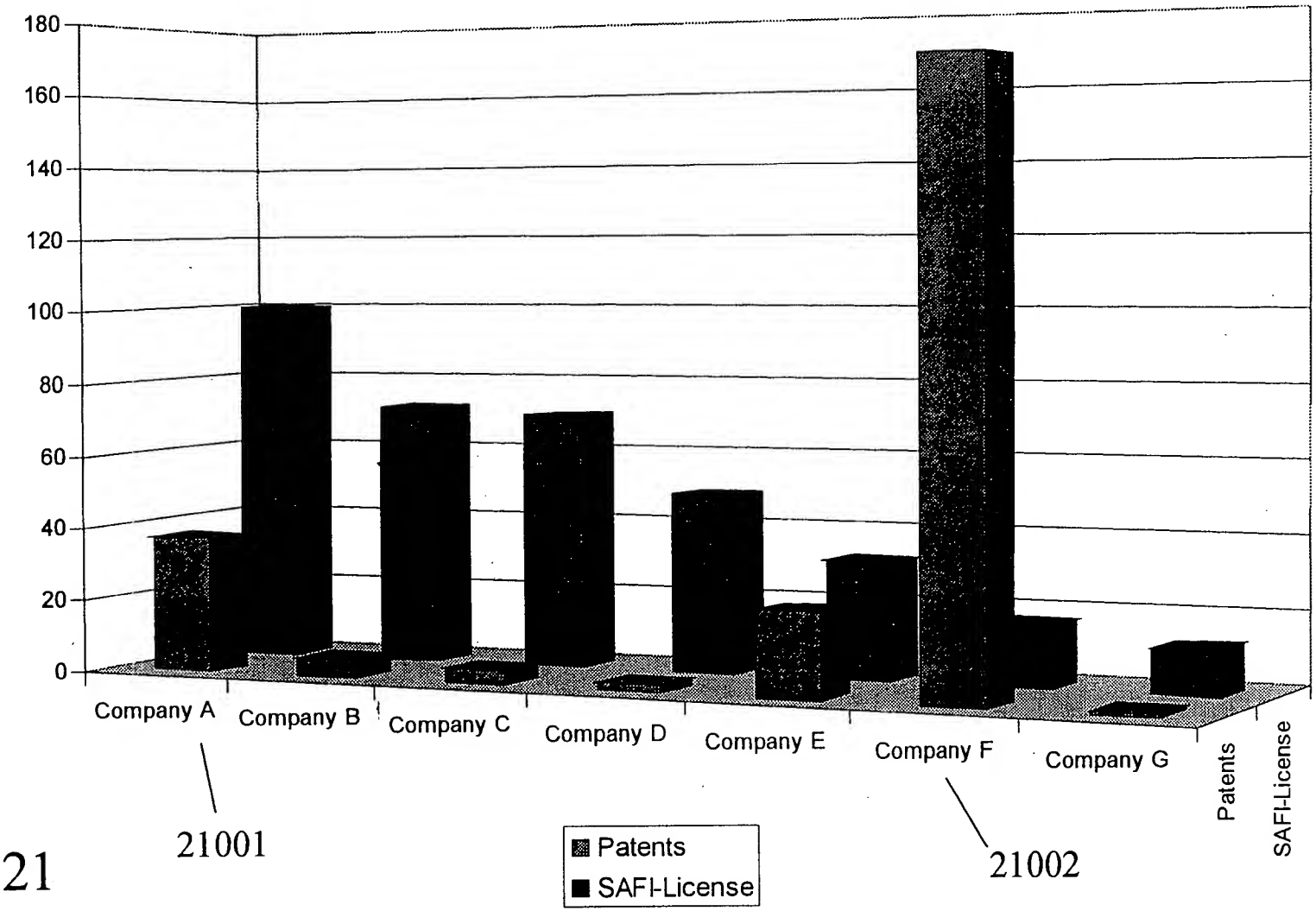


Fig. 21

Standardized Assignee Cell Index - Application B

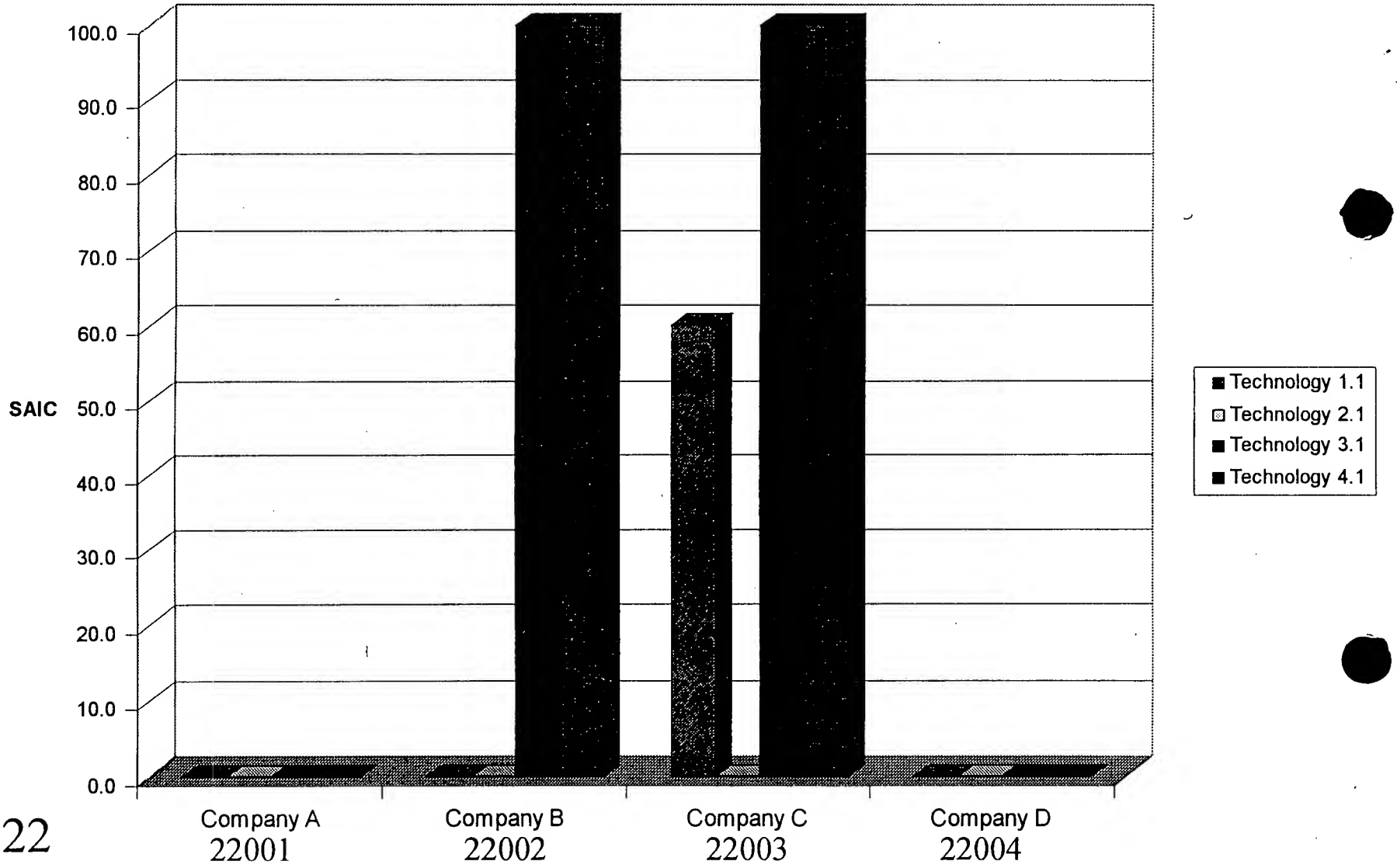


Fig. 22

Standardized Assignee Cell Index - Application C

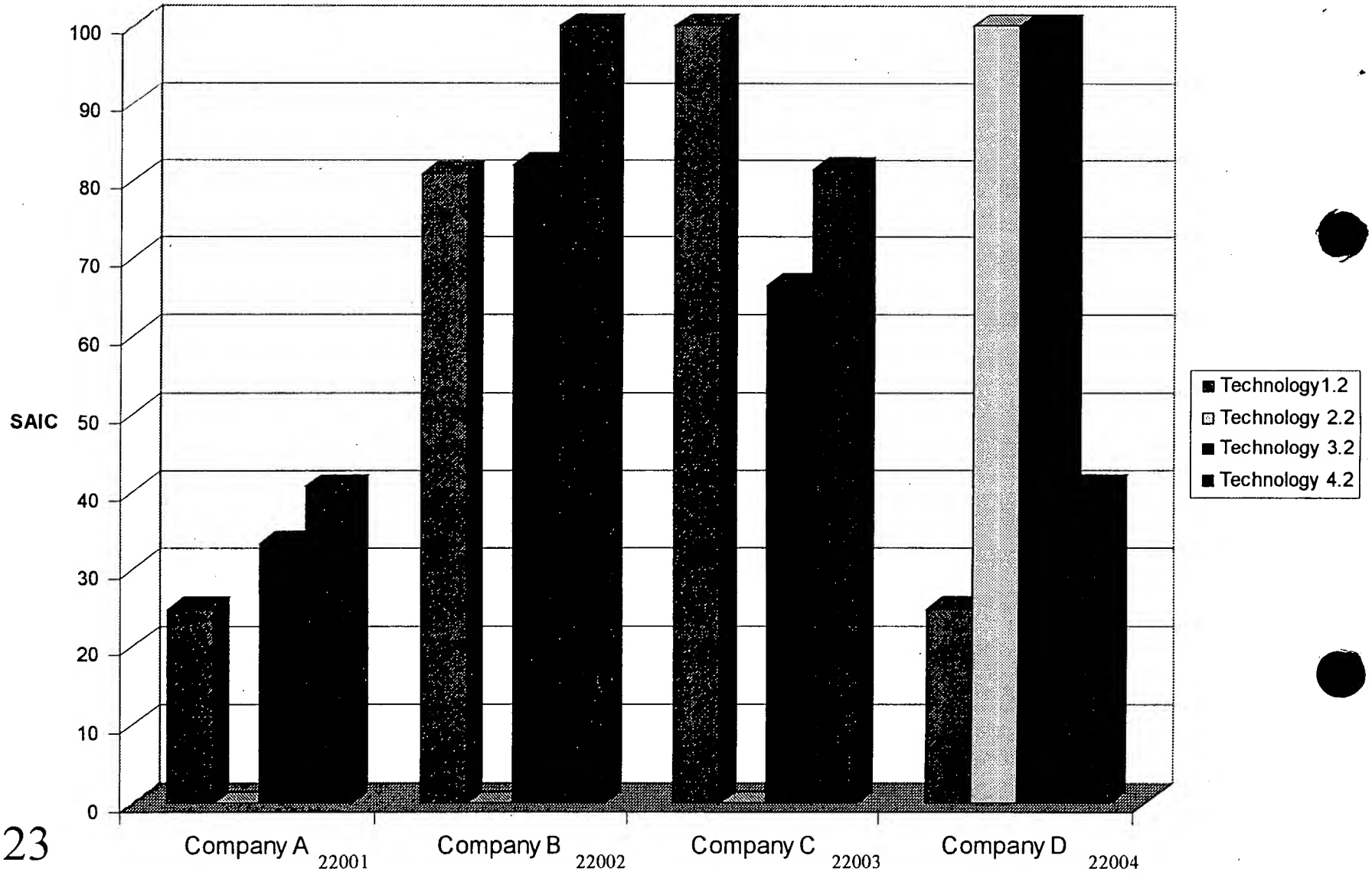


Fig. 23

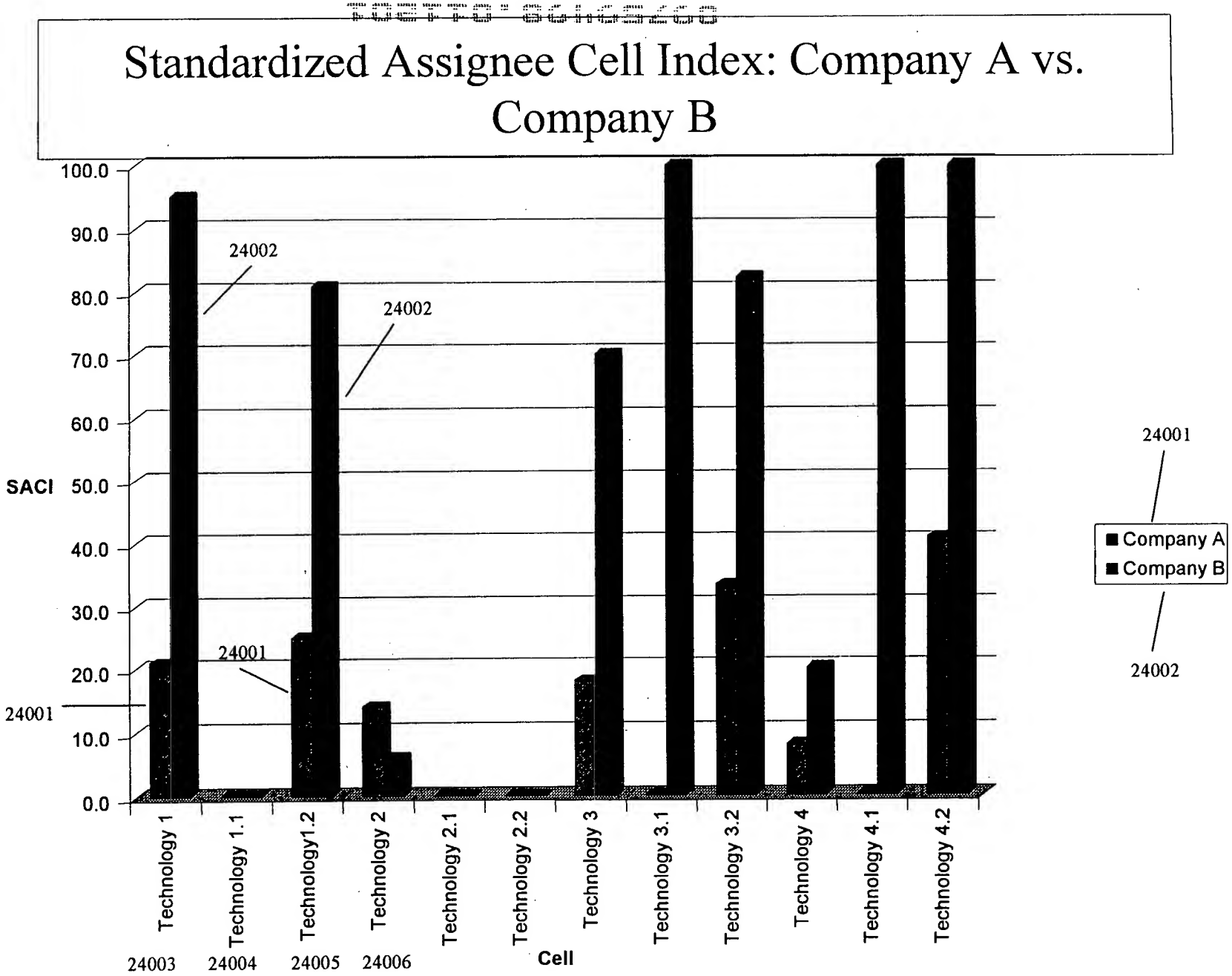

Standardized Assignee Cell Index: Company A vs. Company B
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
SACI
24001
24002
24002
24001
Technology 1
Technology 1.1
Technology1.2
Technology 2
Technology 2.1
Technology 2.2
Technology 3
Technology 3.1
Technology 3.2
Technology 4
Technology 4.1
Technology 4.2
24003
24004
24005
24006
Cell
24001
Company A
Company B
24002

Fig. 24

Naturally Defined Clusters

Clusters	Count of Cells	Occurrences
C05,A05	2	18
C06,A06	2	18
A01,C01	2	16
A02,C02	2	14
A05,C05	2	14
A06,C06	2	14
B06,C06	2	10
C02,C05	2	10
C01,A01	2	8
C03,C05,C02	3	6
C02,C03	2	6
C05,C02	2	6
C06,B06	2	6
C04,A04,A06,C06	4	4
C06,A06,C05,A05	4	4

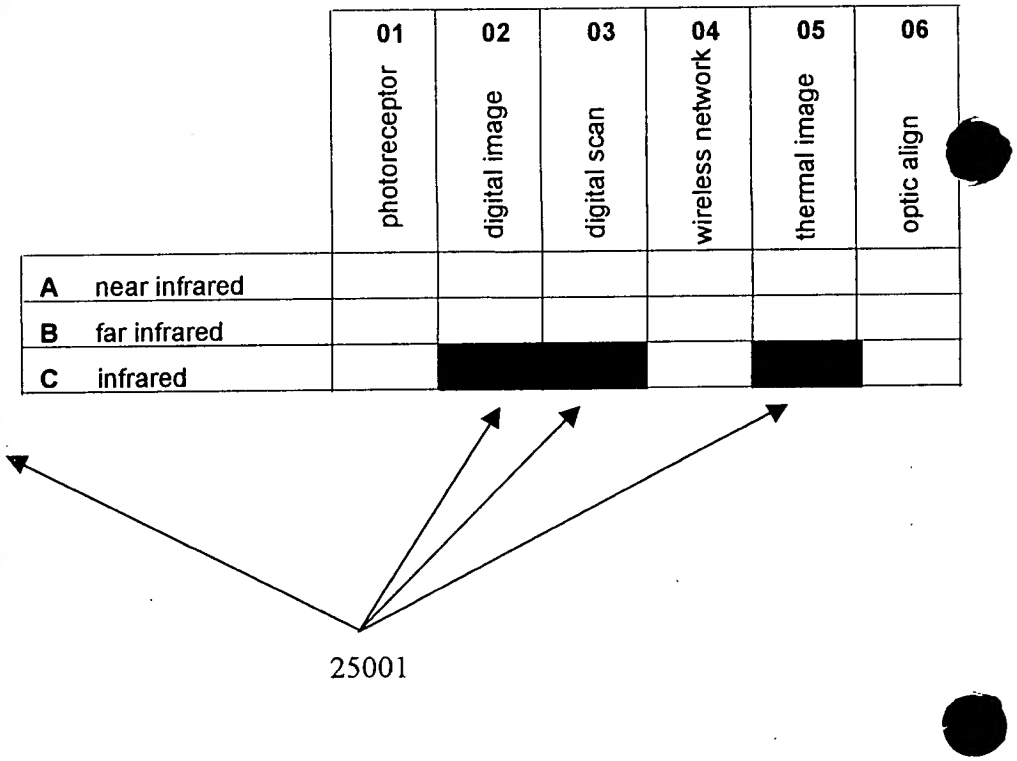


Fig. 25A

Top Assignees Across a Selected Cluster

C02, C03, C05

C02, C03, C05
Eastman Kodak
Minnesota Mining & Manufacturing
Texas Instruments
United States Of America
Hughes Electronics
Polaroid
Raytheon
Matsushita Industrial Electric
Us Philips
He Holdings Dba Hughes Electronics
Honeywell
Agfa-Gevaert
Massachusettes Institute Of Technology
Cairns & Brother
Nec
Raytheon Ti Systems

Fig. 25B

Top Inventors

Eastman Kodak

Inventor	Hits	Patents	Weighted Hits	Weighted Action
Chapman, Derek D.	10	10	11	4
DeBoer, Charles D.	8	8	9	5
Evans, Steven	6	6	6	3
Burberry, Mitchell S.	3	3	4	3
Schildkraut, Jay S.	2	2	3	4
Tutt, Lee W.	2	2	3	3
Momot, David	2	2	2	3
Bugner, Douglas E.	2	1	2	4
Byers, Gary W.	2	1	2	6
Kolb, Jr., Frederick J.	2	1	2	2
Vogel, Richard M.	2	1	2	1
Harvey, Donald M.	1	1	3	4
De Groot, Gerald H.	1	1	2	5
McIntyre, Dale F.	1	1	2	1
Simpson, William H.	1	1	2	3
Bloom, Richard M.	1	1	1	2

Fig. 26

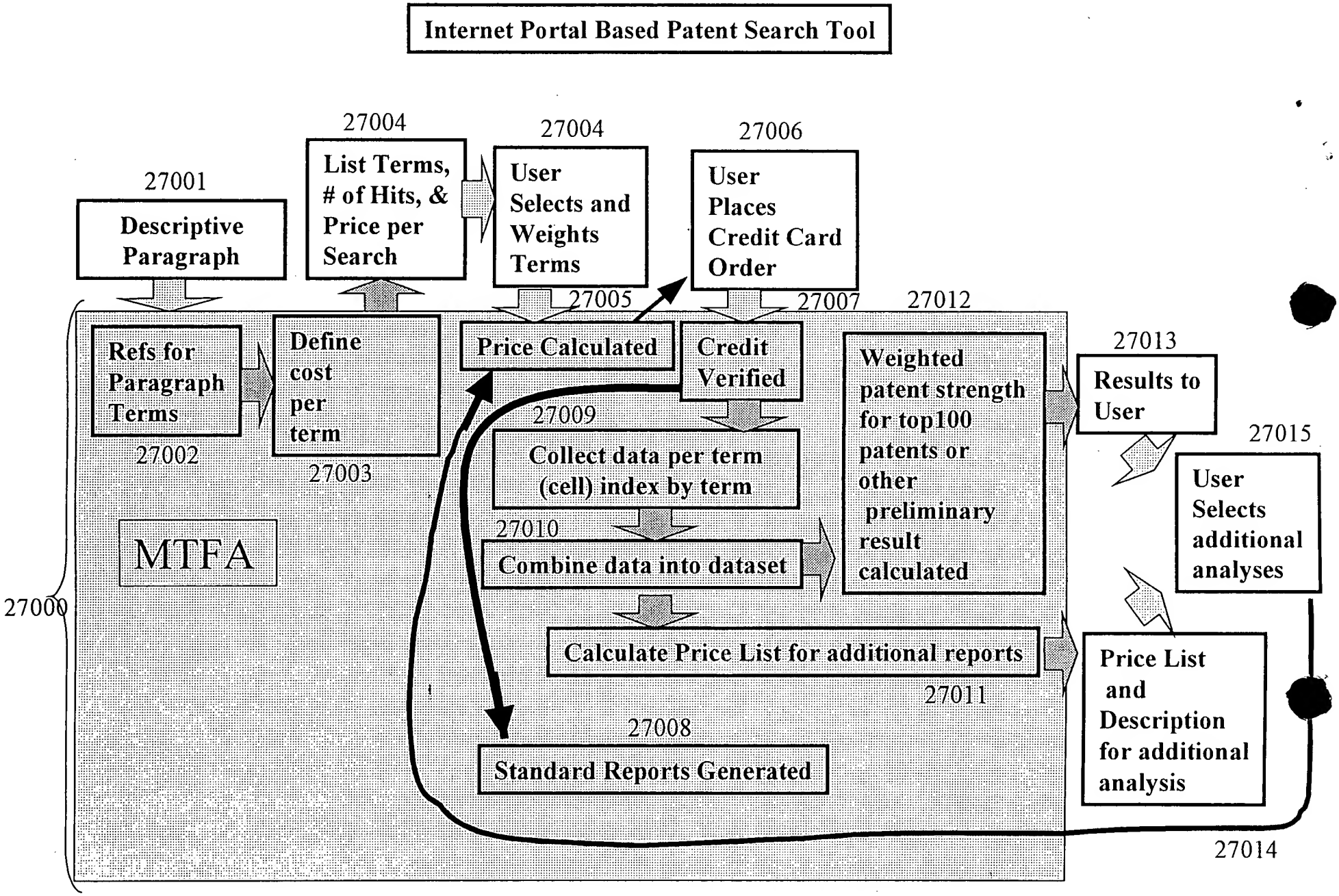

Internet Portal Based Patent Search Tool
27001
Descriptive Paragraph
27004
List Terms, # of Hits, & Price per Search
27004
User Selects and Weights Terms
27006
User Places Credit Card Order
27005
27007
27012
Refs for Paragraph Terms
27002
Define cost per term
27003
Price Calculated
Credit Verified
27009
Collect data per term (cell) index by term
27010
Combine data into dataset
Weighted patent strength for top100 patents or other preliminary result calculated
27013
Results to User
27015
User Selects additional analyses
MTFA
27000
Calculate Price List for additional reports
27011
Price List and Description for additional analysis
27008
Standard Reports Generated
27014

Fig. 27

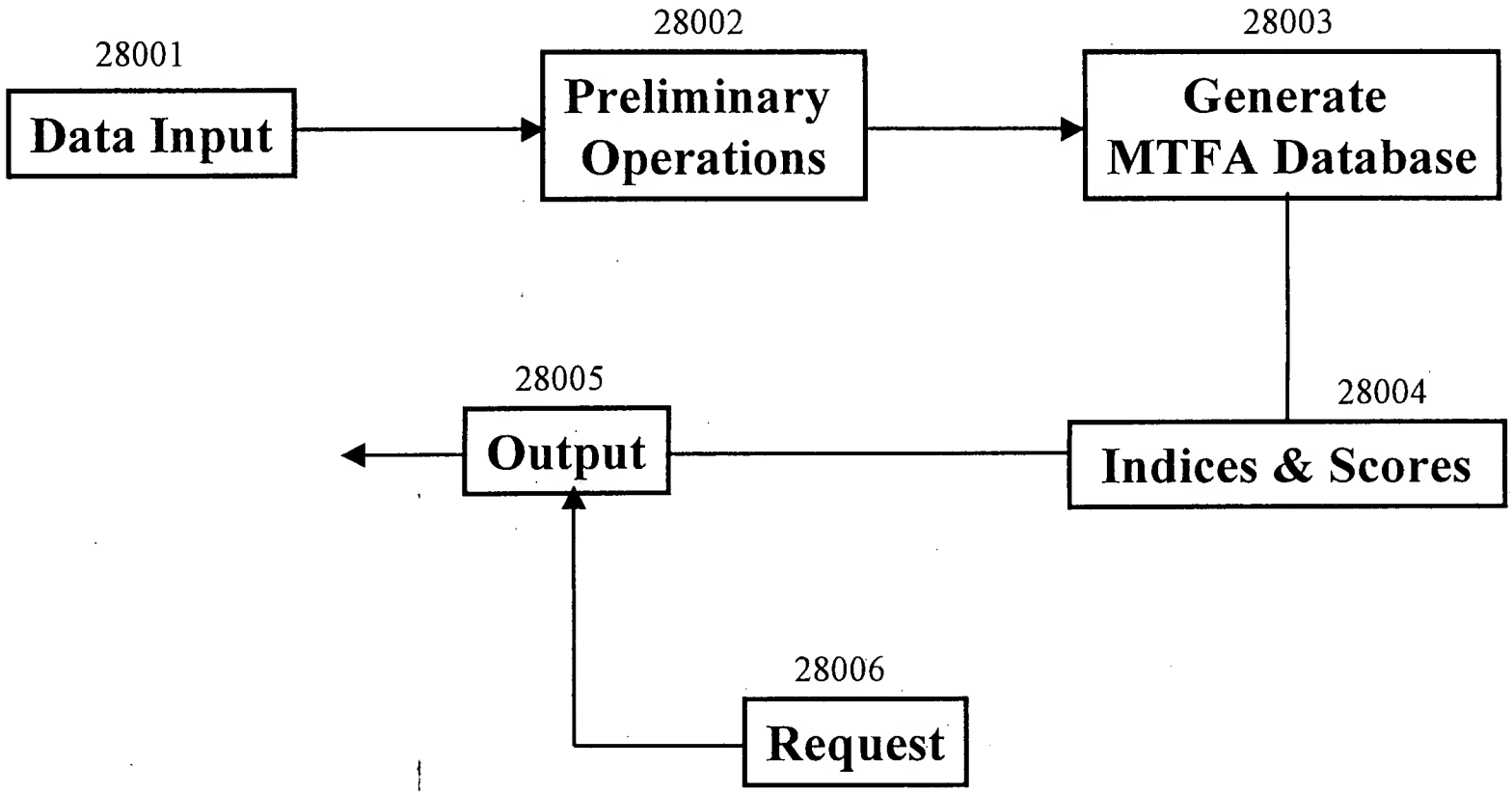

28001
Data Input
28002
Preliminary Operations
28003
Generate MTFA Database
28004
Indices & Scores
28005
Output
28006
Request

Fig. 28

MTFA Altitude

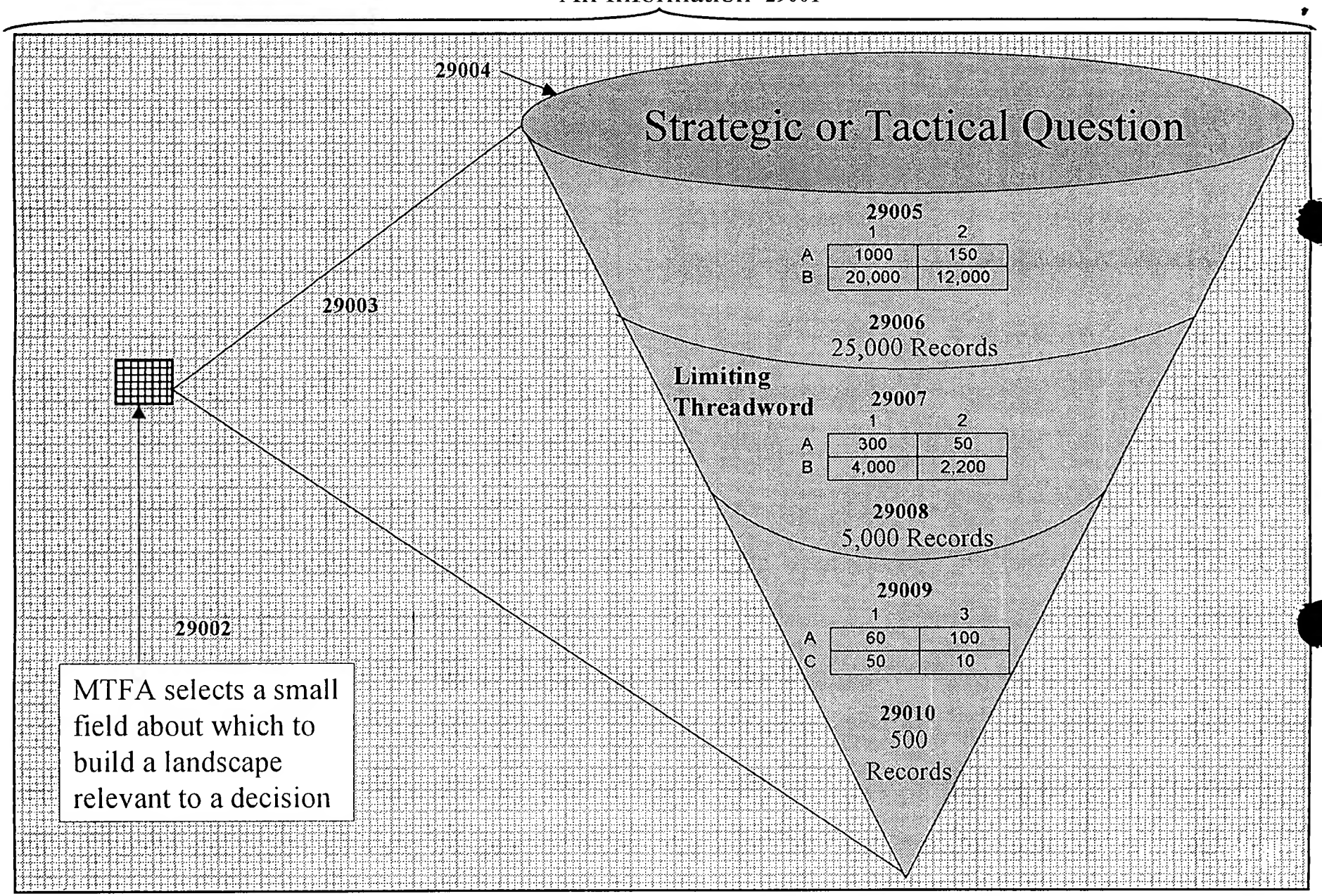


Figure 29